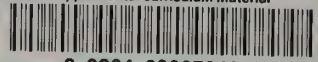


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**Supplemental Curriculum Materials**  
  
**for**  
  
**K-12 HIV/AIDS Education**

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This publication is intended for use in conjunction with the **MONTANA AIDS CURRICULUM GUIDELINES**. The supplemental materials will provide Montana educators with additional lesson plans and transparency masters for K-12 grade levels.

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# Kindergarten



GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Describe the difference between being sick and being well.
2. Understand that some diseases are "caught" and some are not "caught".

1. With the class, the teacher will brainstorm a list of words that complete the phrases, "When I am well, I feel ..." and "When I am sick, I feel ..."
2. With the teacher, the class will complete the story lines distinguishing contagious from noncontagious illnesses.  
Examples:
  - a. Ann has chicken pox. Mary wants to see Ann's spots. Should she visit Ann? What might happen if Mary visits Ann?
  - b. Bill's grandpa is living at Bill's house since he had a heart attack. Bill wants Jerry to stay overnight. Can Jerry catch a heart attack from Bill's grandpa? Teacher and students continue to create their own story lines.





## KINDERCARTEN

GOAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Identify and practice healthy behaviors that reduce the chance of becoming sick.

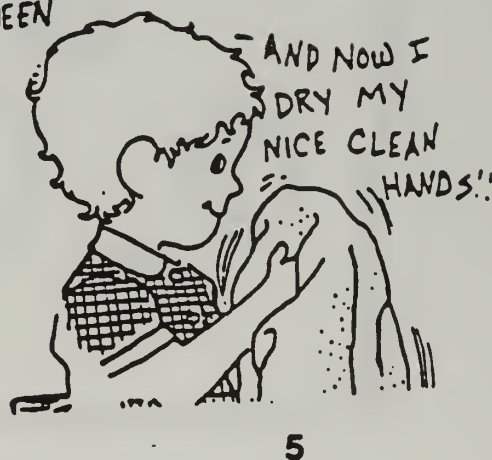
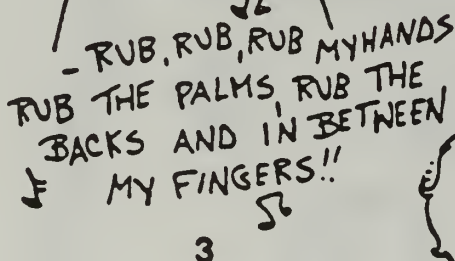
1. With direction from the teacher, students will role play healthy behaviors which they have identified such as:
  - a. washing hands
  - b. using tissues when sneezing or coughing
  - c. getting adequate rest.
  - d. eating balanced meals
  - e. sharing thoughts and feelings (laughing and crying)
  - f. exercising
2. Teacher will reinforce the practice of healthy habits in school on a regular daily basis.
3. Teacher will reinforce healthy habits in school by:
  - a. Practicing hand washing. (Worksheet K-A)
  - b. Demonstrating simple exercises. Students will join in.
  - c. After discussion of healthy foods, students will color foods from the four basic food groups. (Worksheets K-B through K-E)



# Washing Hands

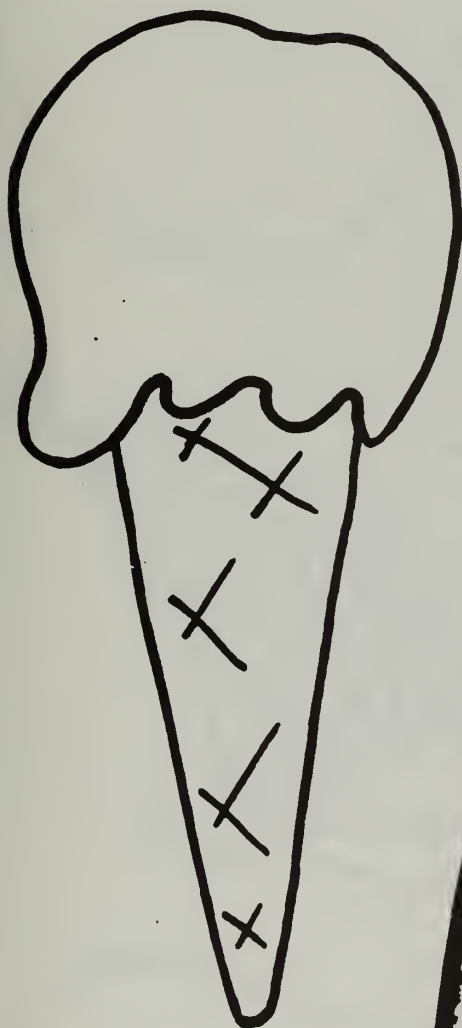
Washing hands is the first line of defense against disease and infection. They should be washed after playing, before eating, after handling pets, after going to the toilet, after holding hands over mouth when sneezing and coughing, and after any kind of scratch or cut has occurred.

Demonstrate and have children practice washing hands, using the following procedures:





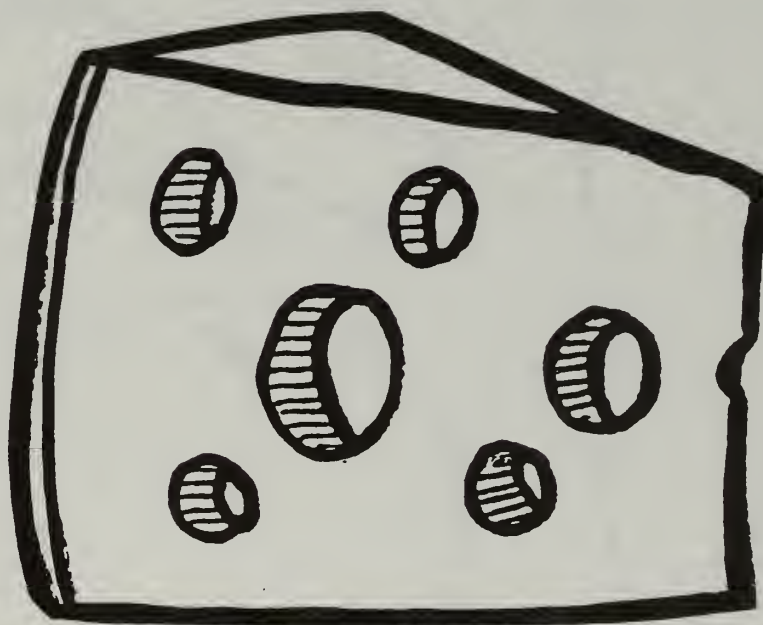
# MILK GROUP



Ice Cream



Milk

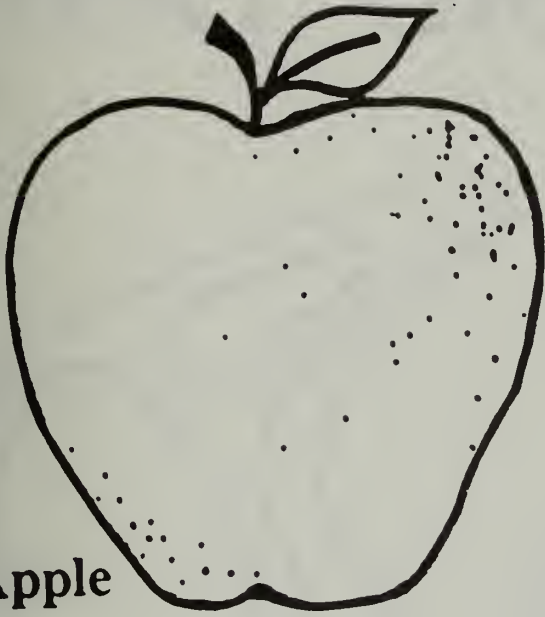


Cheese

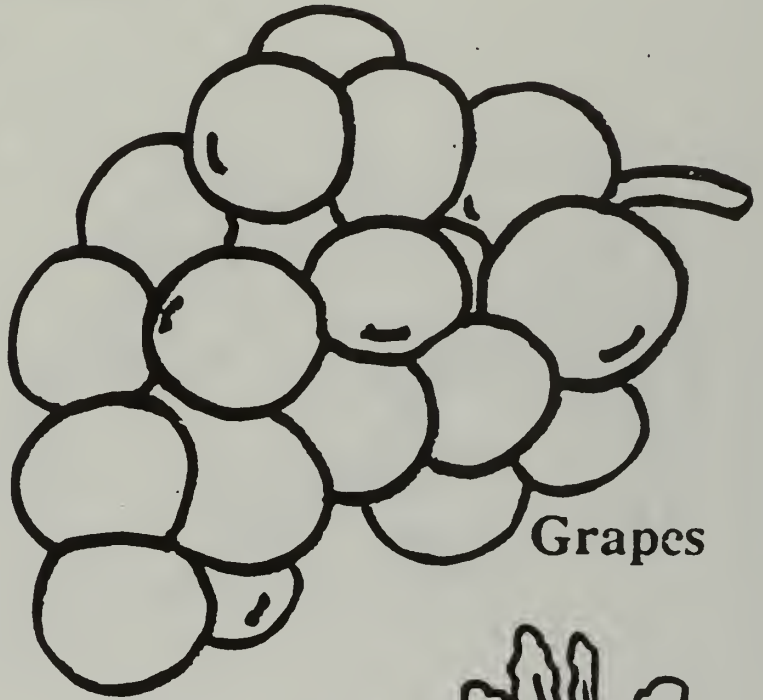




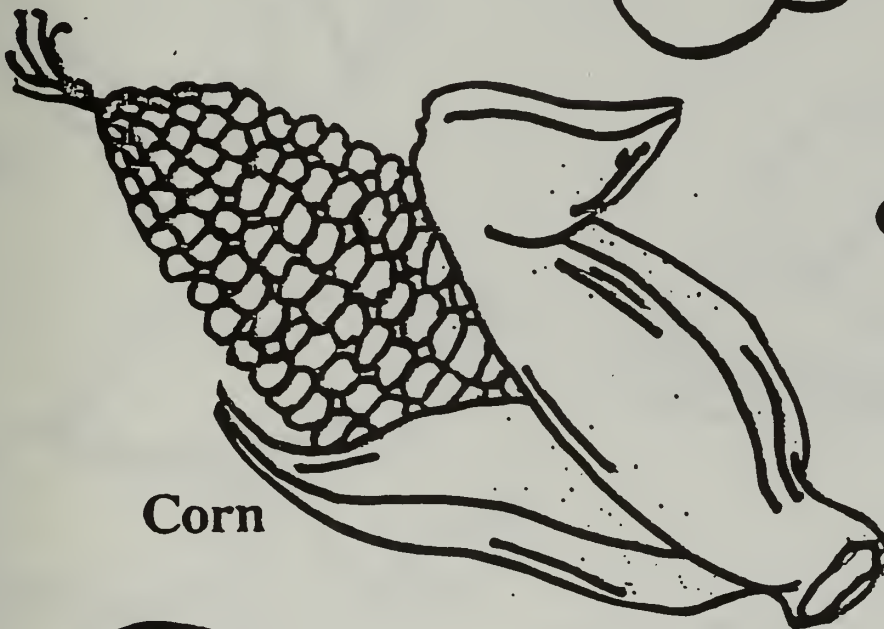
# FRUIT - VEGETABLE GROUP



Apple



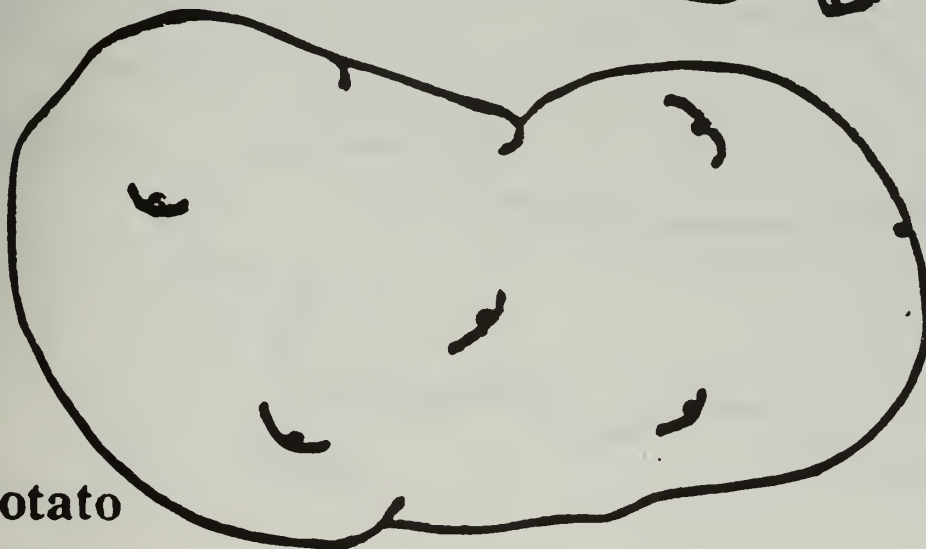
Grapes



Corn



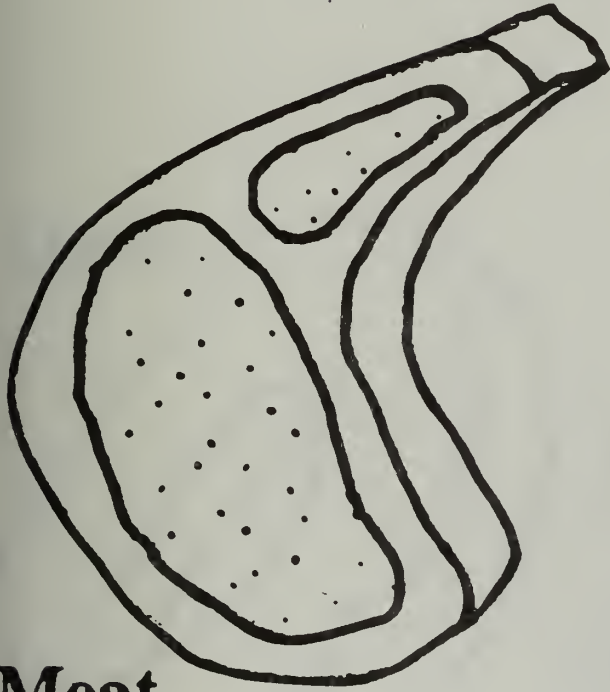
Carrot



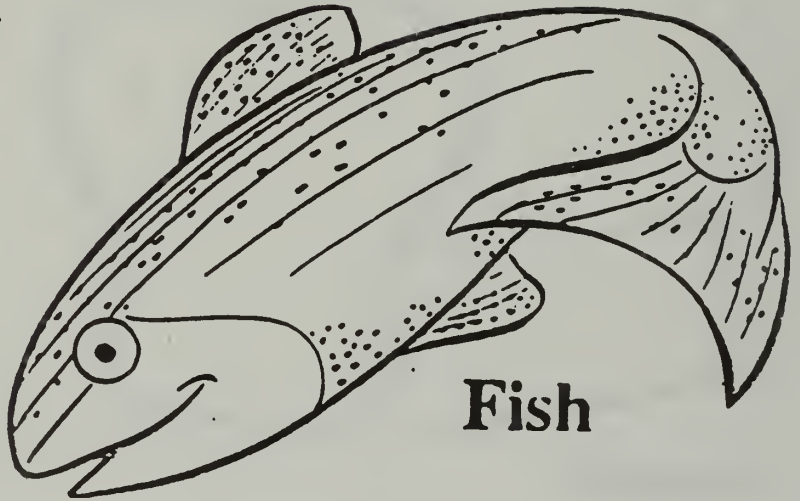
Potato



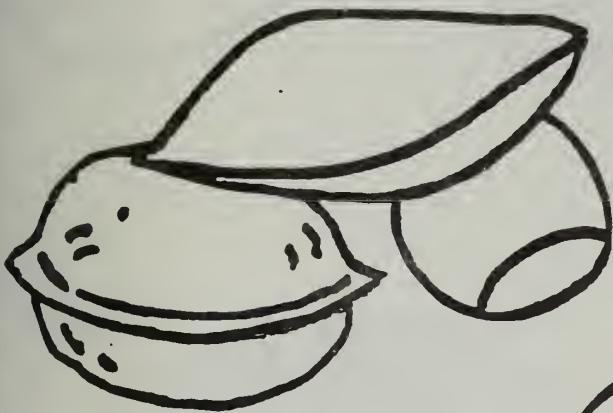
# MEAT GROUP



**Meat**



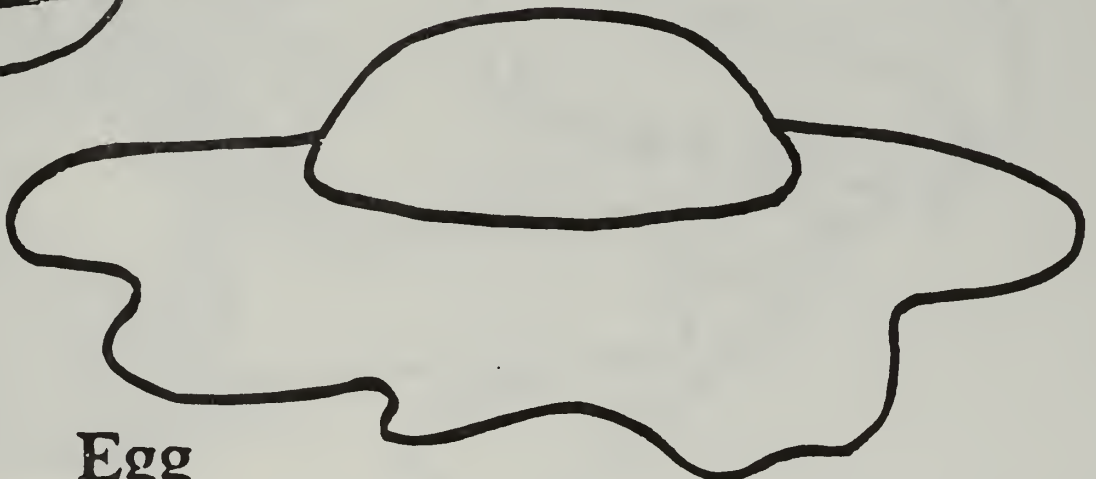
**Fish**



**Nuts**



**Turkey**

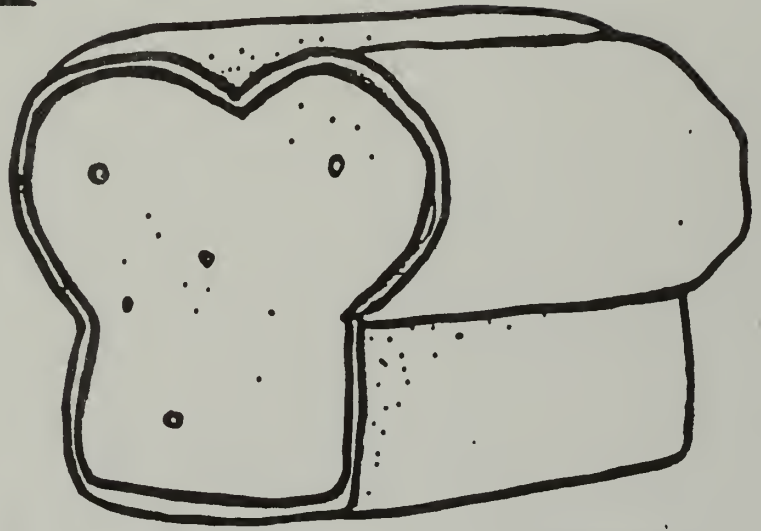
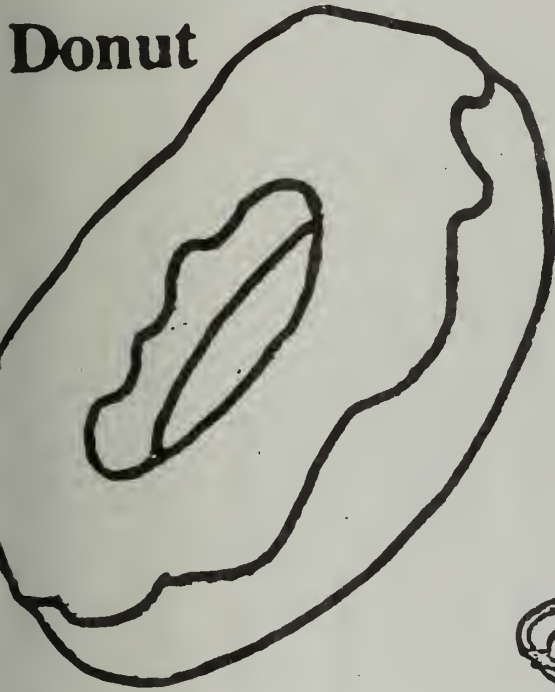


**Egg**

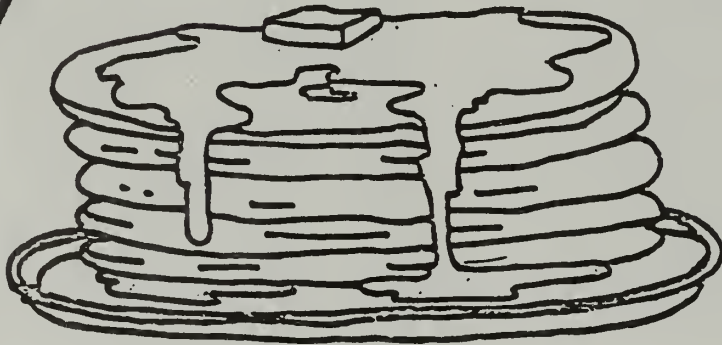


# BREAD - GRAIN GROUP

Donut

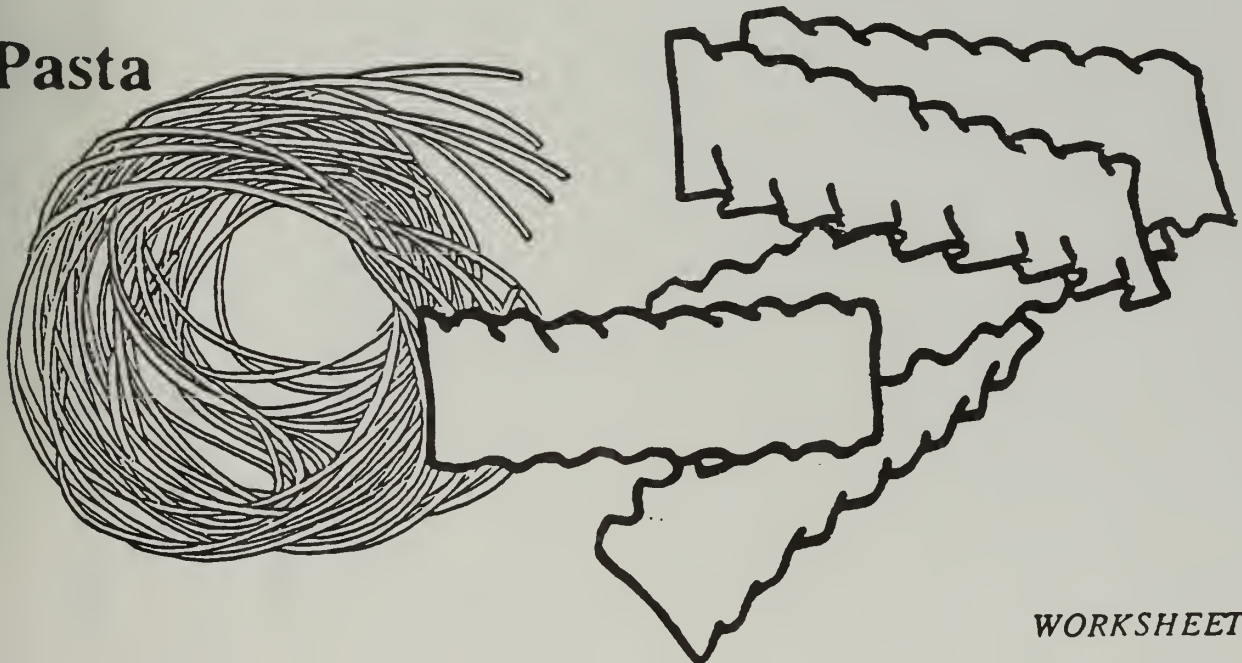


Bread



Pancakes

Pasta







## KINDERGARTEN

GOAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

TEACHER NOTES  
AND RESOURCES

### STUDENT OUTCOMES

### POSSIBLE ACTIVITIES

Students will:

1. Recognize that people need friends both when they are well and when they are sick.

Progressive story:

1. The teacher will begin a short story about a fictional kindergarten student (Jim, Jane, Sue, etc.).
  - (Jane) woke up late on Monday morning. She didn't have time to eat breakfast and got to school after the bell rang. What will happen to her? How will she feel?
  - Everyone in Jane's class was busy at a learning center. Jane felt alone. What could you do to help her have a better day?

NOTE: Teacher and/or students may wish to create additional scenarios for the story.



GOAL IV: Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Identify health helpers.

1. Begin a collection of magazine and coloring book pictures of health helpers. Students will create a bulletin board of these and additional pictures they may find. (Worksheets K-F through K-J)

2. Invite a community health helper to be a guest in the classroom, i.e. nurse, police officer, EMT, pharmacist, fireman, doctor, dentist, or religious leader.

3. Students will relate personal experiences about visits to the dentist, doctor, pharmacist, or hospital to stay or receive treatment.





Police Officer







Parents





Dentist





Nurse







Doctor





**F i r s t**

**G r a d e**



## FIRST GRADE

GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

Students will:

1. Identify common communicable and noncommunicable diseases.
2. Describe how common communicable diseases are usually spread.

#### POSSIBLE ACTIVITIES

1. With the teacher, the students will name diseases familiar to them. Together the class will create a chart which sorts their list into diseases that you can catch and those you can't.

Example:

colds	heart disease
chicken pox	cancer
flu	stroke
measles	arthritis
mumps	diabetes
strep throat	asthma

2. With the teacher, the class will list ways a disease may be "caught". The list should include sneezing, coughing, sharing cups, sharing dishes, sharing silverware, and not washing hands.
3. With the teacher, the class will make a list of diseases they have experienced. Have the affected students describe how the illness might have been "caught", how he/she felt, how the illness was identified and what treatment occurred.



## FIRST GRADE

COAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

Students will:

1. Identify and practice healthy behaviors that reduce the spread of communicable diseases.

#### POSSIBLE ACTIVITIES

1. With direction from the teacher, class members will pantomime healthy behaviors which reduce the spread of communicable diseases, i.e. washing hands, being immunized, using tissue, covering mouth, washing eating utensils between uses.
2. The class will keep a daily log of personal health behaviors and identify those that were not healthy. Each student will then complete his/her own "My Healthy Promise" pledge.  
(Worksheet 1-A)
3. Students will color pictures in HEALTH E OWL COLORING BOOK and discuss the healthy behaviors depicted.



# MY HEALTHY PROMISE

I will \_\_\_\_\_ ,

I will \_\_\_\_\_ ,

I will \_\_\_\_\_ ,

I will \_\_\_\_\_ ,

to be a responsible, healthy disease preventer.

\_\_\_\_\_  
Name





## FIRST GRADE

GOAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

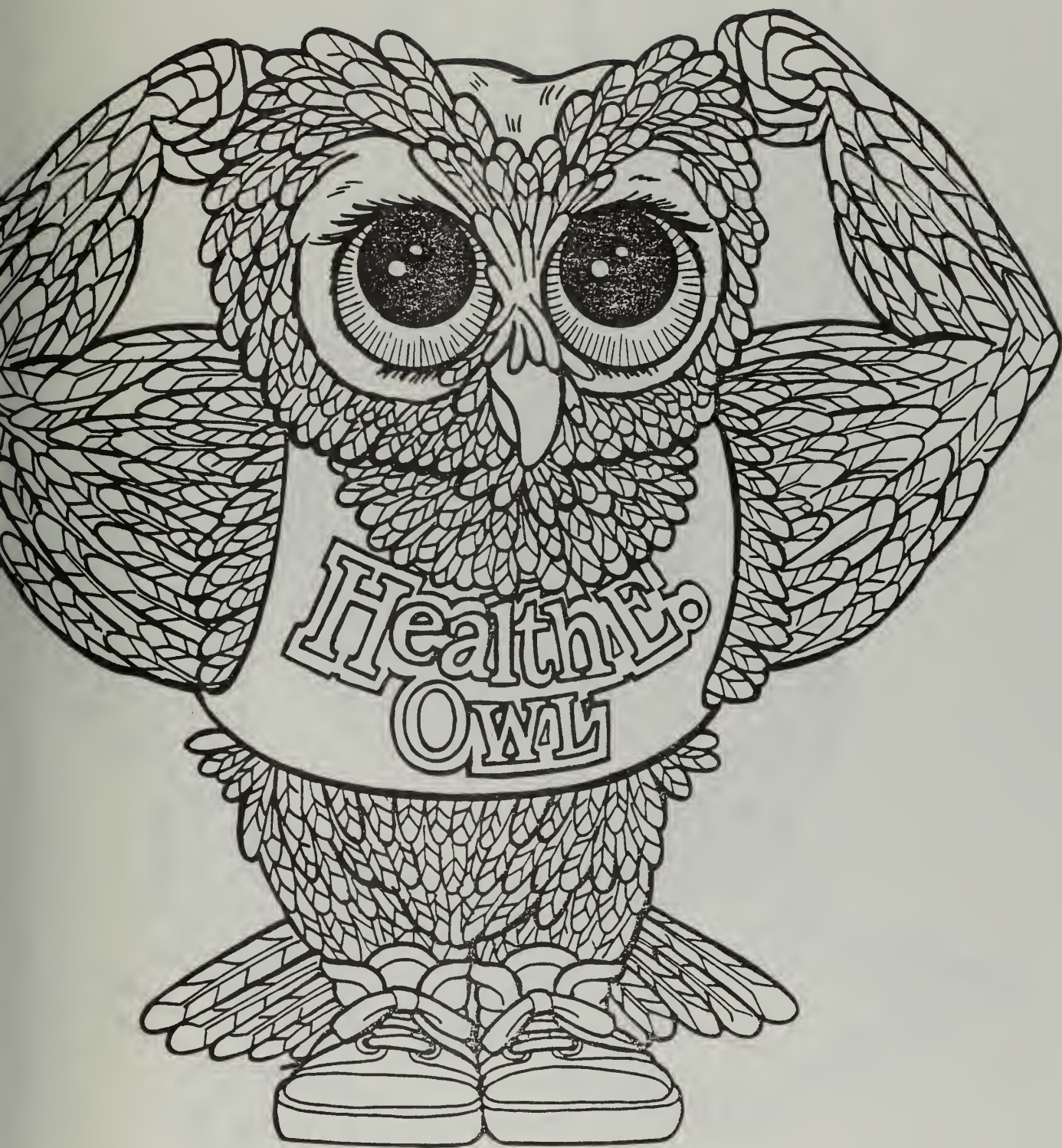
Students will:

1. Describe how family members show care and help one another during times of illness.

1. In groups of three or four, students assume various family roles and role play situations in which family members show care and responsibility for one another. Some of these behaviors might include:
  - helping with chores
  - playing with a sibling
  - reading to a family member
  - making a card or drawing a picture
  - spending time together

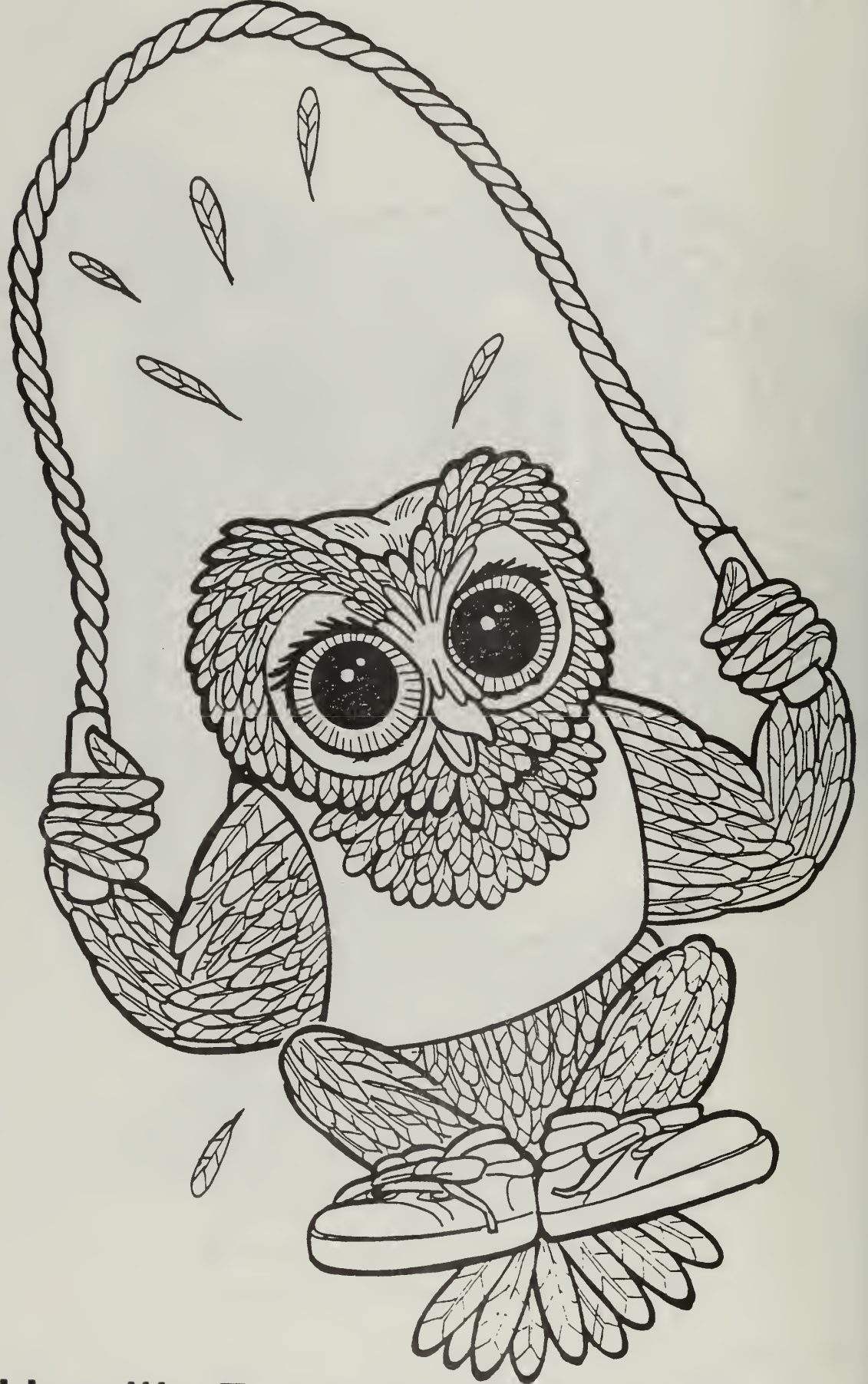
2. Each student will complete a picture by drawing a family member caring for him/her when sick in bed. The student will then describe what is happening in his/her picture to the class. Make a bulletin board of the students' pictures. (Worksheet 1-B)





COLORING BOOK

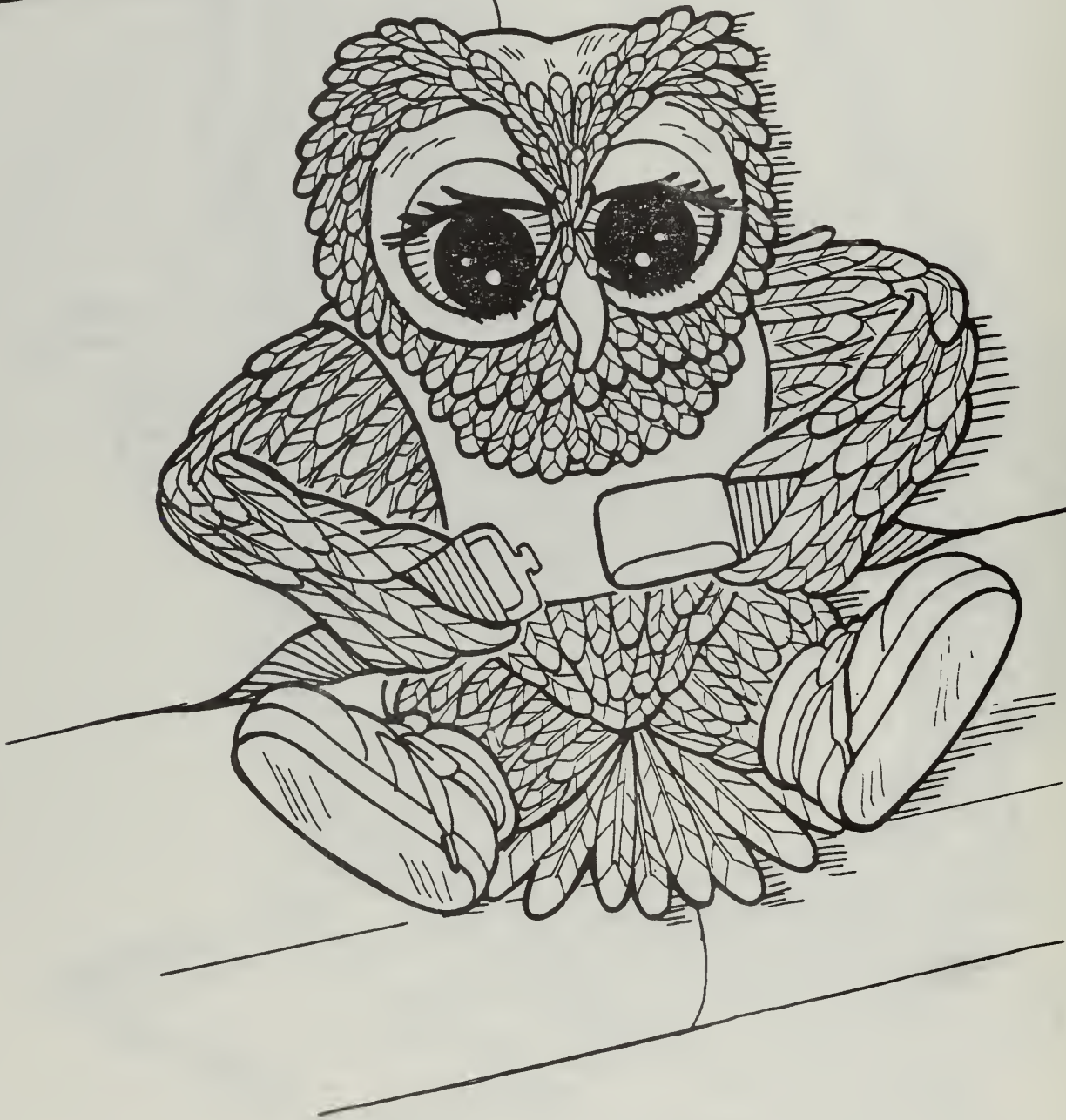




Health E. Owl jumps rope for exercise.

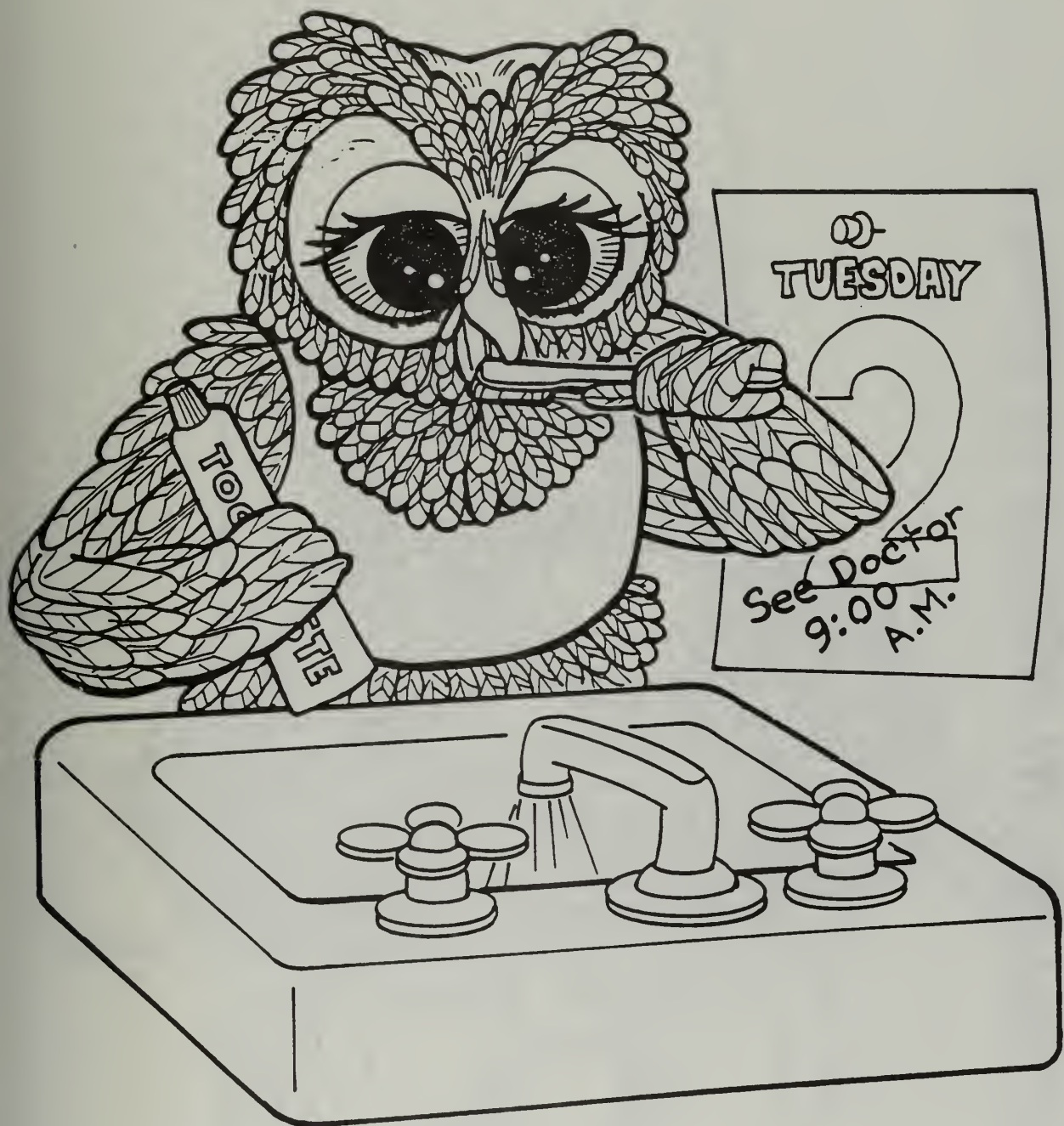


Health E. Owl takes a bath every day.



Health E. Owl always buckles his safety belt when riding in a car.





Health E. Owl brushes his teeth  
after every meal.



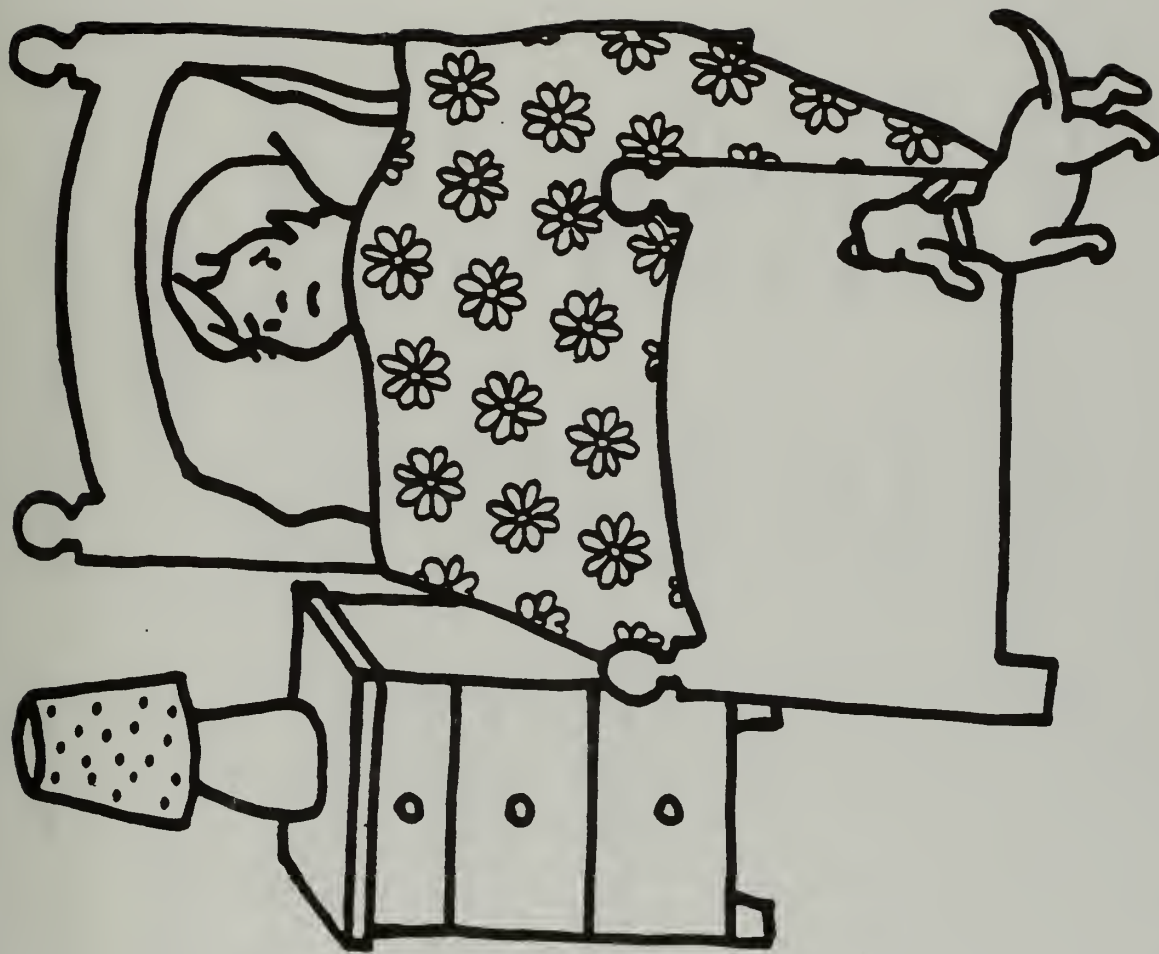
Health E. Owl eats 3 good meals  
a day.



Health E. Owl sleeps at least 8  
hours every day.







# When I Am Sick



COAL IV: Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Explain why immunizations are given before entering school.

1. A nurse could be used as a resource person to discuss immunizations and TB testing with students.

2. Teachers may wish to cite examples of diseases which have been controlled by immunizations (MMR, small pox, polio).

3. Students can ask their parents what diseases they are immunized for. The class can make a list of these.

NOTE: The South Dakota Department of Health recommends the following shot schedule:

<u>AGE</u>	<u>SHOTS</u>
2 months	DTP and polio
4 months	DTP and polio
6 months	DTP (polio optional)
15 months	measles, mumps, and rubella
18 months	DTP and polio
4- 6 years	DTP and polio
14-16 years	tetanus booster and diptheria booster

All shots must be up-to-date when a child enters school in September.





**S e c o n d**

**G r a d e**



## SECOND GRADE

**GOAL 1:** Recognize the causes and characteristics of communicable and noncommunicable diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Understand that communicable diseases are spread from one person to another in a chain effect.

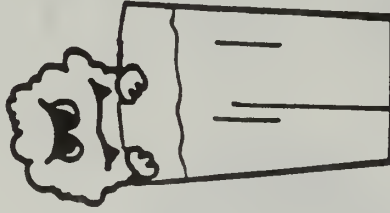
1. Discuss the concept of a chain; the chain grows as one link comes in contact with another. Disease is spread as people with a communicable disease spread their germs by sneezing, coughing, sharing food, etc. (Worksheet 2-A)  
The chain is broken when healthy behaviors prevent the spread of germs. Students can complete worksheet as a class. (Worksheet 2-B)



# Chain of Infection



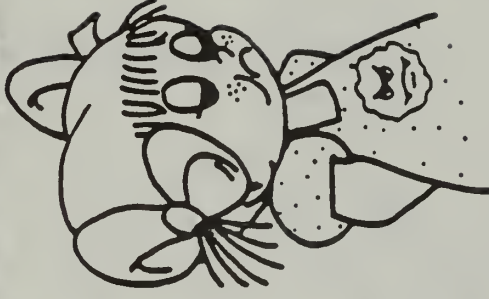
Virus  
Bacteria  
Fungus/Mold  
Parasite



Water droplets  
 .on hands  
 .on food  
 .on shared glass  
 .in a sneeze  
 .in showers  
 Bad food or water  
 Carried by an animal  
 On a shared hat or comb  
 Jumps from person to person



Through  
 .the mouth  
 .the nose  
 Gets into  
 .the eyes  
 .the ears  
 .a cut or sore  
 .a bite  
 .a needle  
 Protection  
 .the skin  
 .tears  
 .hair in the nose



No antibodies to it  
 (if it is a virus)  
 Body is weak  
 .not eating right  
 .not enough sleep  
 .already sick  
 .very upset for a long time

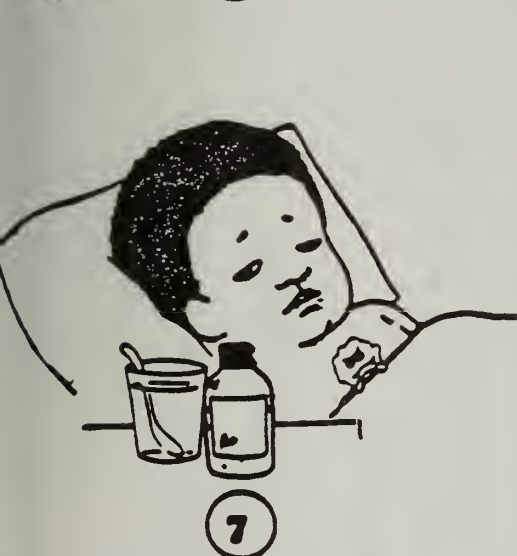
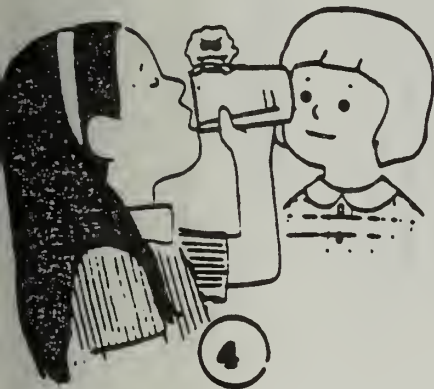
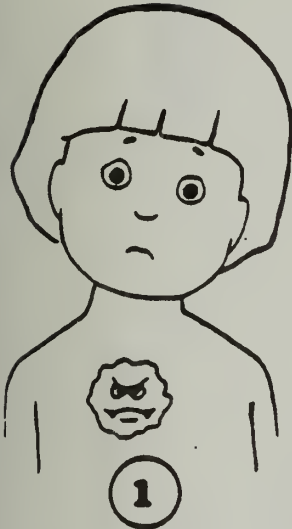


Germ's can travel from person to person.  
Sometimes germ's can make you sick.

Follow the germ.



Mark an "X" on the germ  
each place it could have  
been stopped.







## SECOND GRADE

**COAL II:** Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

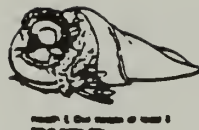
#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

**Students will:**

1. Explain how good health habits prevent disease.
  2. Understand personal responsibility in the prevention and control of disease.
1. Review and reinforce healthy behaviors and how they help to break the disease chain.
  2. Students will complete a list of "I will ..." statements to reflect personal responsibility for good health practices. (Worksheet 2-C)





## So That I Can Stay Healthy

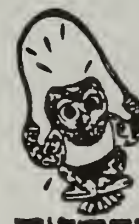
I will

I will

I will

I will

Name





## SECOND GRADE

GOAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Recognize death as a natural step in the life of animals and humans.
2. Recognize the need to express emotions about death/loss to friends and family.

1. Compare life cycles of humans and animals with the cycle of a flower.
2. With the teacher, students will brainstorm ways people express emotions when loss or death occurs. Then students will draw faces which express their emotions at some personal losses.  
(Worksheets 2-D and 2-E)

NOTE: Emotions that might be included are sad, worried, afraid, lonely, puzzled, angry, lost, tired, helpless, and sickly.

3. Students will complete open-ended sentences dealing with feelings such as "I feel happy when ..." and "I feel sad when ..."

NOTE: Guidance counseling program materials are valuable resources for dealing with feelings.





# How I Feel When I Lose Someone I Love



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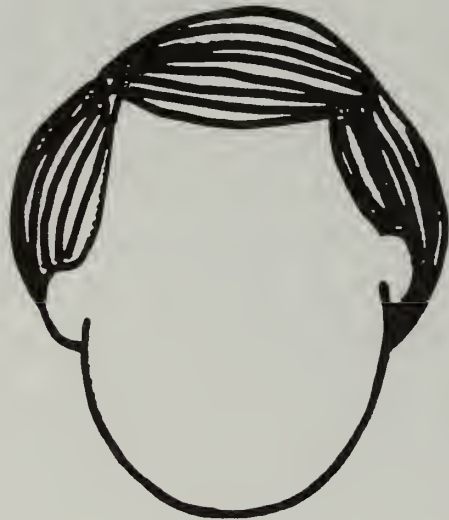
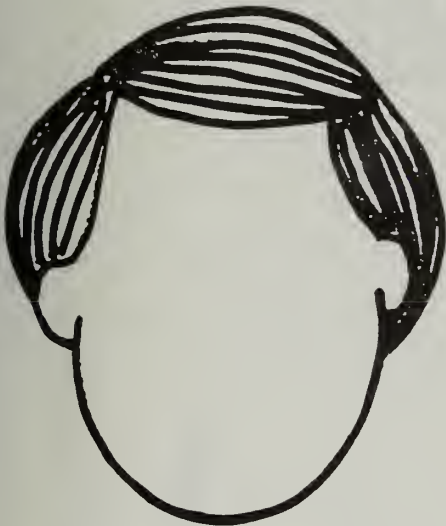
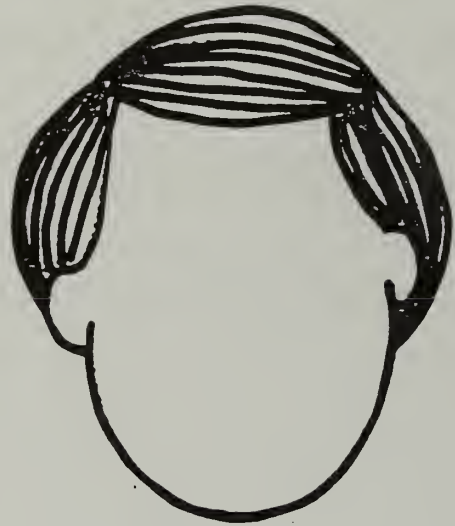
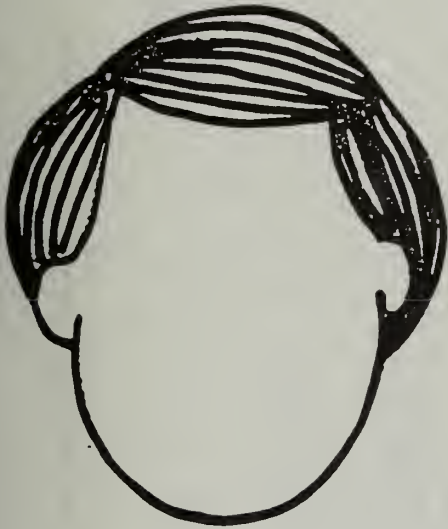


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# How I Feel When I Lose Someone I Love





## SECOND GRADE

**COAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. List local health professionals.

1. Teachers may wish to use a local phone book or other resource listing community health professionals. Students should be able to name their doctor or source of medical help and whether 911 is used for emergencies. (If 911 is used, students should know responsible use for it.)

Students will complete activity sheet for emergency phone numbers.  
(Worksheet 2-F)

2. Review vocabulary.  
(Worksheet 2-G)  
Students will complete vocabulary word puzzle.  
(Worksheet 2-H)



People who can help me are my SUPPORT  
SYSTEM. Some of these people are:

NAME:

PHONE #:

MOM \_\_\_\_\_

DAD \_\_\_\_\_

TEACHER \_\_\_\_\_

POLICE \_\_\_\_\_

FIRE \_\_\_\_\_

DOCTOR \_\_\_\_\_

HOSPITAL \_\_\_\_\_

MINISTER \_\_\_\_\_

HOTLINE \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

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# VOCABULARY

BACTERIA

Tiny organisms that can cause disease

CHAIN OF INFECTION

The passing of germs from one person to another person

DISEASE

An illness

HEALTHY BEHAVIOR

Acting in a way that prevents disease

VIRUS

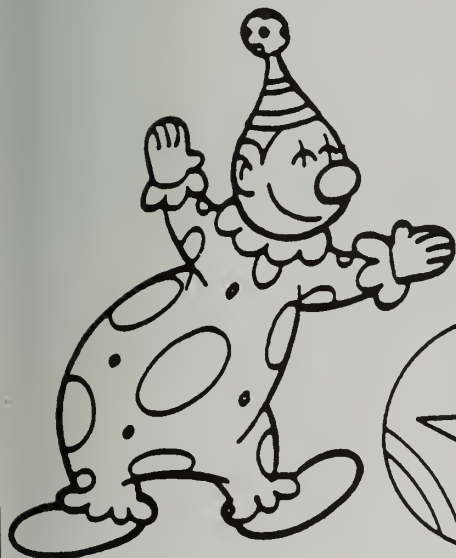
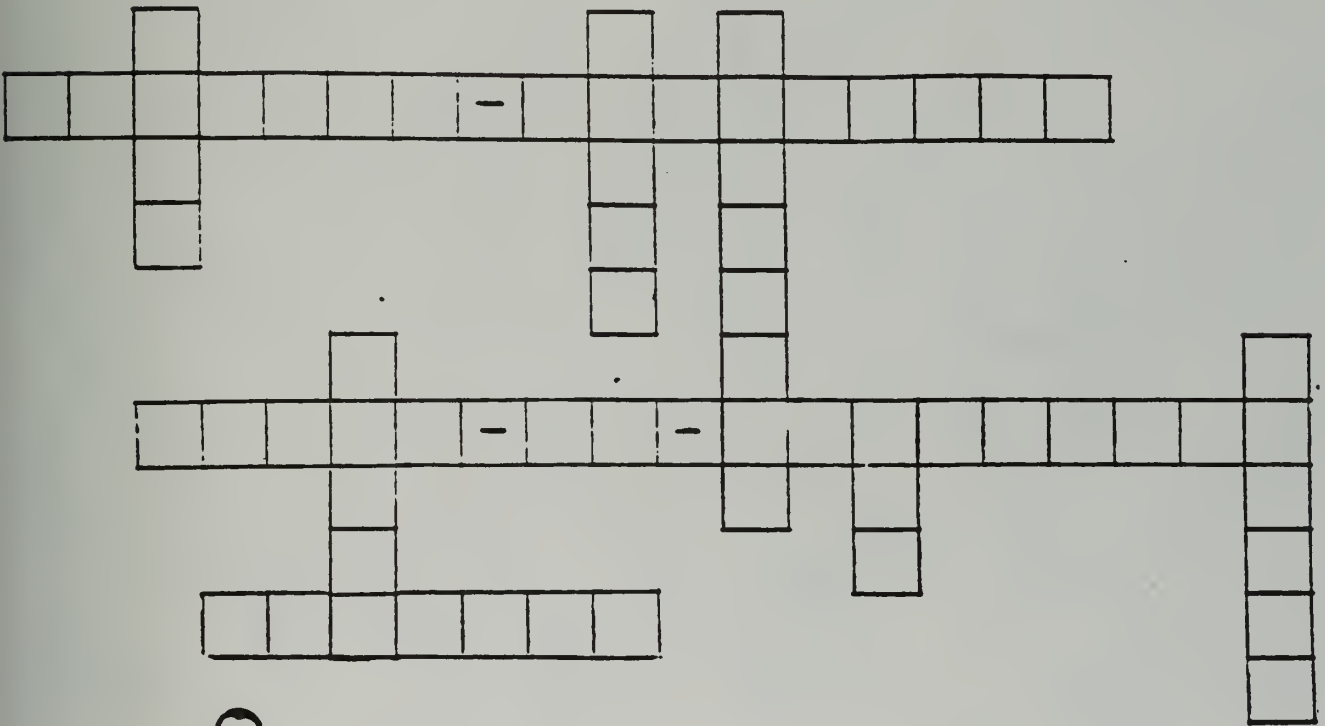
The smallest organisms that can only reproduce inside a living cell. They cause diseases.



# Word Puzzle

DIRECTIONS: Fill in the puzzle with the words underlined in the paragraph below.

Bacteria and viruses are germs that can make me sick. A disease caused by a virus is the flu. A disease caused by bacteria is tooth decay. I should use a tissue over my mouth when I cough or sneeze. I should wash my hands before eating and after going to the bathroom. I should get lots of exercise, eat properly and get plenty of sleep. I should not share the food I am eating or the glass I am drinking out of. If I practice these healthy behaviors, I can break the chain of infection and help keep myself well.



## Answers to Word Puzzle

W G B  
H E A L T H Y B E H A V I O R S  
S R C  
H M T  
S E  
V R  
C H A I N O F I N F E C T I O N S  
R A L  
U U  
D I S E A S E  
E  
E  
E

**T h i r d**

**G r a d e**





GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Understand that some diseases are caused by microorganisms, including viruses and bacteria.
2. Understand that the immune system helps protect the body from disease.

1. Teacher will prepare a presentation on bacteria, viruses, and the immune system that meets the developmental needs of students. (Teacher Information pp. 74-75)
2. Grow bacteria. (Worksheet 3-A)
3. Students will complete a worksheet on the immune system. (Worksheet 3-B)



# TEACHER INFORMATION

---

## BASIC INFORMATION ABOUT BACTERIA

### A. What are bacteria?

- .Bacteria are tiny, one-celled organisms that have cell walls, but do not have a nucleus. Their nuclear material is dispersed throughout the matter in the cell.
- .Bacteria exist in 3 shapes (a) round (cocci); (b) rod-shaped (bacilli); (c) spiral (spirilla).
- .Bacteria are found almost everywhere, in the soil, in the air, in water and on or in plants and animals.
- .Bacteria reproduce by dividing in two.

### B. What are some ways bacteria affect our lives?

#### .Harmful bacteria

1. Some cause diseases (examples: pneumonia, tooth decay)
2. Some cause food to spoil.

#### .Helpful bacteria

1. Some take nitrogen from the soil and make nitrogen compounds in the soil that plants need to grow.
2. When plants and animals die, some bacteria break down the remains into simple kinds of matter (decay).
3. Some foods, such as vinegar, cheese, sour cream and tea are made by using bacteria. Bacteria also are used to turn hides into leather and prepare plant fibers used in making linen, canvas and rope.

## BASIC INFORMATION ABOUT VIRUSES

### A. What are viruses?

- .A virus is a bundle of genes surrounded by a protein coating, carrying instructions for copying itself but without the mechanism for reproduction. Strictly speaking, a virus is not actually alive because it cannot reproduce itself.
- .Must invade a living cell to reproduce itself.
- .Smaller than any living organism. Smaller than waves of light; can only be seen with scanning electron microscopes.

### B. What are some of the ways viruses affect our lives?

#### .Human diseases:

1. Short-term, usually nonlethal diseases (colds, flu, chicken pox).
2. Long-term, usually nonlethal diseases (herpes).
3. Severe illnesses that may be life-threatening (various forms of hepatitis, AIDS, polio).
4. May be involved in development of some forms of cancer.



.Animal diseases:

1. Can invade livestock, which need to be destroyed if they have certain viral infections, thereby contributing to food shortages.
2. Can invade pets (feline leukemia, rabies and equine encephalitis all kill the animals affected).

.Plant diseases:

1. Destroy food crops and contribute to food shortages.

THREE IMPORTANT CONCEPTS ABOUT THE EFFECTS OF DISEASE-CAUSING MICRO-ORGANISMS

- A. These concepts are useful in understanding the different levels at which humans, animals or plants are affected by viruses or other micro-organisms.

.EXPOSURE. Actual physical contact with a disease-causing organism.

Exposure does not necessarily mean an individual is infected or develops disease. If a person with a cold sneezes near you, you may be exposed to the virus causing the cold if any airborne moisture droplets from the sneeze reach your own mouth or nose. The cold virus may or may not enter cells in your body, causing infection or disease.

.INFECTION. After exposure, a disease-causing organism may invade cells in your body. This is "infection." Infection does not necessarily mean symptoms will develop. If you are exposed to and then infected with a cold virus, your immune system may be able to stop the infection before symptoms develop. Infected people, whether or not they are symptomatic, are often capable of transmitting the disease-causing organism to others.

.DISEASE. If, after exposure and infection, the invading organism overpowers the immune system, symptoms or disease will appear. Depending on the characteristics of the organism and your own immune system, the disease may be mild or severe.





## GROWING BACTERIA

### QUESTIONS:

Why is it important to wash our hands before eating?  
What do we mean by sterile?

### NEEDED:

Screw-top jars sterilized - 2  
(Boil and seal, in class if possible, to show concept of killing germs by boiling and using sterile technique by not touching inside of the top.)  
Knife for peeling potatoes - 2  
(Boil with jars and place on sterile jar top)  
Unpeeled potatoes - 2 (Thoroughly washed with soap and brush and rinsed)

### ACTIVITY:


1. Select 2 children, each one to peel a potato and place it in one of the jars.  
One child washes his/her hands thoroughly with soap and water. (Wash twice with a brush, if possible, as do doctors and nurses in surgery.)  
This child is not to touch anything, even the door knob, until he/she has peeled the potato and placed it inside the jar and sealed it.
2. The other child peels potato without his/her hands being washed and places it in other jar. This child also may label the jars, "Hands Washed" and "Hands Unwashed."
3. Place both jars in a warm place and observe daily.

### RESULT:

The potato peeled by the unwashed hands will grow such a mass of mold and bacteria colonies that everyone should want to wash hands, avoid putting pencils, etc., in mouth, and handle foods more carefully.

There should be a contrast with the other jar, although it probably wasn't completely "sterile" (germ free) due to the circumstances.



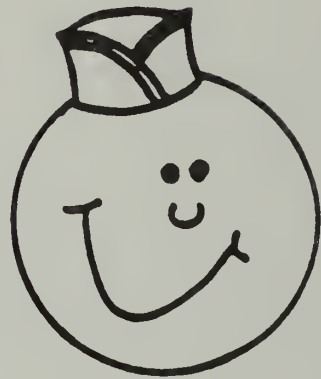
If the  gets inside you, you don't always get sick.


## THERE'S AN ARMY INSIDE YOU TO HELP



GERMS

SOLDIERS



It's not a real army, but it does help you stay well. The  are called ANTIBODIES. Their job is to fight the bad



that can sneak into your body.

You must take care of your . If you do not go to bed

on time, your  will be tired. If you do not eat well,

your  will not get the food they need. If you forget to


wash your hands, your  will have to fight more .

Sleepy, hungry  can not do a good job for you. The




may win. You may get sick.

IMMUNIZATIONS, the shots you need for school, also

help you stay well. They give your army new  to help

fight the .

Your  can help you stay well if you take care of them.



GOAL II: Identify the methods of preventing, treating, and controlling diseases.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

- 1. Identify diseases caused by microorganisms that have been controlled.
- 2. Identify personal actions necessary for continued control of these diseases.

- 1. With direction from the teacher, the class, either in small groups or as a whole, will brainstorm a list of diseases caused by viruses and bacteria (Teacher Information p. 79)
- 2. The class then identifies personal actions needed to control the list of diseases they have generated.



# TEACHER INFORMATION

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## SOME DISEASES CAUSED BY VIRUSES AND BACTERIA

### VIRAL

Measles (Rubeola)  
German Measles (Rubella)  
Chicken Pox  
Herpes Simplex (causes cold sores)  
Small Pox  
Hepatitis A & B  
Warts  
Yellow Fever  
Rabies  
Influenza  
Pneumonia (viral)  
Infectious Mononucleosis  
Common Cold  
Poliomyelitis  
Mumps  
AIDS

### BACTERIAL

Pneumonia (bacterial)  
Rheumatic Fever  
Typhoid Fever  
Cholera  
Whooping Cough  
Plague  
Diphtheria  
Tetanus  
Tuberculosis  
Leprosy  
Tooth Decay  
Gum Disease  
Food Poisoning  
Boils  
Sore Throat





THIRD GRADE

COAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Understand the effect of an epidemic on a community.

1. With the teacher, the class will discuss what happens during a flu epidemic, when mumps or measles infect the student population in school, etc.



GOAL IV: Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

TEACHER NOTES  
AND RESOURCES

STUDENT OUTCOMES

POSSIBLE ACTIVITIES

Students will:

1. Understand that scientists all over the world are trying to find a cure for diseases caused by microorganisms.

1. Using age-appropriate resources, groups of three to four students will research and present to the class information on scientists who have contributed to disease control. (Examples: Jonas Salk, Louis Pasteur)
2. Review vocabulary. (Worksheet 3-C)  
Students will complete vocabulary word search in groups of two. (Worksheet 3-D)



# VOCABULARY

ANTIBODIES	Chemicals that destroy disease-causing organisms (germs) that enter the body
BACTERIA	Tiny organisms that can cause disease
COMMUNICABLE DISEASE	A disease that is passed from one person to another person
DISEASE	An illness
EPIDEMIC	The fast spreading of a disease affecting many people
GERM	Any tiny organism that causes a disease
IMMUNE SYSTEM	The body's system of defense against disease and infection
VIRUS	The smallest organisms that can only reproduce inside a living cell. They cause diseases.







# Word Search

CAN YOU FIND ALL OF THESE WORDS IN THE PUZZLE? THEY MAY BE UP, DOWN, ACROSS, DIAGONAL, OR BACKWARDS. CIRCLE EACH WORD AS YOU FIND IT.

AIDS  
BACTERIA  
CHICKEN POX  
COLD  
COMMUNICABLE  
DISEASE  
EPIDEMIC

FOOD POISONING  
FLU  
GERM  
IMMUNE SYSTEM  
MEASLES  
MUMPS  
PNEUMONIA

RABIES  
SORE THROAT  
TETANUS  
TOOTH DECAY  
VIRUS  
WARTS

C	O	M	M	U	N	I	C	A	B	L	E	Y	H
X	T	R	C	P	N	E	U	M	O	N	I	A	I
M	E	B	L	J	M	B	G	K	D	J	Z	C	K
G	N	I	M	M	U	N	E	S	Y	S	T	E	M
Z	T	A	A	A	V	O	C	H	J	A	I	D	S
D	A	L	B	D	I	S	E	A	S	E	S	H	T
F	I	S	S	O	R	E	T	H	R	O	A	T	C
L	R	N	E	U	U	L	E	V	P	R	F	O	I
U	E	N	K	O	S	S	T	R	A	W	L	O	M
G	T	F	W	Z	I	A	A	Q	C	D	U	T	E
M	C	H	I	C	K	E	N	P	O	X	Q	E	D
V	A	R	W	D	J	M	U	M	P	S	F	G	I
X	B	E	X	Y	Z	H	S	E	I	B	A	R	P
G	N	I	N	O	S	I	O	P	D	O	O	F	E

A word search puzzle grid with various words related to diseases and the immune system highlighted in black. The words include:

- COMMUNICABLE
- PNEUMONIA
- IMMUNE SYSTEM
- AIDS
- DISEASE
- SORE THROAT
- ULE
- STRAW
- CHICKENPOX
- MUMPS
- SEIBAR
- GNINOSIOPDOOE
- AIR ET
- FOI M

**F o u r t h**

**G r a d e**



## FOURTH GRADE

COAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Identify AIDS (Acquired Immune Deficiency Syndrome) as a disease that is difficult to get.
2. Identify AIDS as a disease caused by a virus.
3. Explain how the AIDS virus attacks the body's immune system.

1. Pretest class to determine their knowledge of AIDS before formal instruction.

NOTE: Several sample pretests are provided.  
(Worksheets 4-A)

2. Students will discuss the acronym for AIDS.  
(Worksheet 4-B)  
Then students will either color a poster of "cartoonized" Acquired Immune Deficiency Syndrome or create a poster of their own.  
(Worksheets 4-C and 4-D)

3. Using the information provided, the teacher will present information on the body's immune system to achieve desired student outcomes.  
(Teacher Information pp. 99-107)



**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 4-5**

**STUDENT PRE-ASSESSMENT SURVEY**

**Directions:**

Please circle T (true), F (false) to answer the following statements.

1. T     F     People can give each other infections.
2. T     F     AIDS is caused by a virus.
3. T     F     You can protect yourself from many infections.
4. T     F     AIDS can be cured.
5. T     F     Children who attend school with someone who has AIDS can catch the infection.

Complete the sentences below.

6. I want to learn about AIDS because \_\_\_\_\_

---

---

7. The questions I have about AIDS are \_\_\_\_\_

---

---

8. What do you think AIDS is? \_\_\_\_\_

---

---

9. List ways AIDS is spread. \_\_\_\_\_

---

---

10. What do you think, "AIDS: The Preventable Epidemic," means? \_\_\_\_\_

---

---



## Directions:

Please circle T (true), F (false) to explain the following statements.

1. (T) F People can give each other infections.

Explain: Communicable diseases are passed from person to person. They can spread through the air like colds, through direct contact like head lice, and through sexual contact as in syphilis and AIDS.

2. (T) F AIDS is caused by a virus.

Explain: AIDS is caused by a virus. Human immunodeficiency virus is spread by unsafe sexual contact and/or exposure to blood. Once the virus enters the body, it can compromise the immune system to the point that a person develops other serious infections.

3. (T) F You can protect yourself from infection.

Explain: To maintain health, one can make responsible decisions about behaviors such as saying no to sex and drugs. Washing hands after bathroom use and before eating are also responsible behaviors that prevent infections. Following appropriate infection control measures will also protect you and prevent hepatitis B or AIDS virus spread from blood exposure. Proper diet and exercise are essential in health maintenance.

4. T (F) AIDS can be cured.

Explain: There is no cure for AIDS. Education to encourage healthy behaviors is the tool to prevent AIDS.

5. T (F) Children who attend school with someone who has AIDS can catch the infection.

Explain: The AIDS virus is spread through unsafe sexual contact and exposure to blood. AIDS is not spread through casual contact.

Complete the following sentences.

6. I want to learn about AIDS because

(Student responses could include that they want to stay healthy and/or help others.)

7. The questions I have about AIDS are

(These questions can be used to help you identify the focus of information.)

8. What do you think AIDS is?

(Answers might include a disease that affects the body's immune system, a disease without a cure or other more detailed explanations.)

9. List ways AIDS is spread.

(Student responses should detail risk behaviors such as needle sharing.)

10. What do you think, "AIDS: The Preventable Epidemic," means?

(Responses could include that AIDS can be prevented through healthy choices or other prevention strategies they've learned.)

## AIDS PRETEST

(Circle "T" for "True" or "F" for "False" for each statement below.)

<u>True</u>	<u>False</u>	
T	F	1. AIDS is a disease you are born with (inherited).
T	F	2. The cause of AIDS is unknown.
T	F	3. AIDS can be gotten from shared needles.
T	F	4. AIDS cannot be gotten by giving blood.
T	F	5. You cannot catch AIDS by sitting next to a person with AIDS.
T	F	6. There is a test to tell if a person has AIDS.
T	F	7. A person with AIDS must tell an employer he or she has the disease.
T	F	8. If you are not sexually promiscuous and do not use illegal drugs, you have little risk of getting AIDS.
T	F	9. Homosexuals are the only people who get AIDS.
T	F	10. There is a cure for AIDS.

## ANSWER SHEET

### AIDS PRETEST

(Questions 3, 4, 5, and 8 are "True", the rest are "False".)

1. False - AIDS is acquired or caught. Infants can acquire AIDS prior to or during birth from infected mothers.
2. False - AIDS is caused by a virus - HIV (Human immunodeficiency syndrome)
3. True - There is a major concern over the drug users, many of whom share needles.
4. True - AIDS can be gotten by receiving infected blood but not by giving blood.
5. True - AIDS is not transmitted by shaking hands, a door knob, toilet seats, or by casual contact.
6. False - The test only tells if a person has been exposed to AIDS and has antibodies to the AIDS virus--not if the person has AIDS.
7. False - AIDS is a medical problem protected by confidentiality and privacy laws.
8. True - These are the greatest risks of transmission.
9. False - Intravenous drug users, sexual partners, children born to infected parents, and blood to blood product recipients are at risk.
10. False - At the present time there is no known cure. Treatment is aimed at the opportunistic infections that occur with AIDS since the immune system is affected.

## WHAT DO YOU KNOW ABOUT AIDS

DIRECTIONS: Circle either T (True) or F (False)

- |  |   |   |
|--|---|---|
| 1. AIDS is caused by a virus.                                      | T | F |
| 2. You can get AIDS by going to school with a person who has AIDS. | T | F |
| 3. Only males get AIDS.  | T | F |
| 4. You can get AIDS from swimming pools.                           | T | F |
| 5. There is a cure for AIDS.                                       | T | F |
| 6. You can get AIDS by donating blood.                             | T | F |
| 7. Most people can protect themselves from getting AIDS.           | T | F |
| 8. Most people who have AIDS got it by sexual intercourse.         | T | F |
| 9. You can get AIDS by hugging.                                    | T | F |
| 10. People who inject drugs into themselves can get AIDS that way. | T | F |

## ANSWERS TO PRETEST

1. True
2. False
3. False
4. False
5. False
6. False
7. True
8. True
9. False
10. True

## PRETEST

Please respond to each statement by placing an   X   in the most appropriate column.

	TRUE	FALSE	DON'T KNOW
1. AIDS IS CAUSED BY A VIRUS.	_____	_____	_____
2. ANTIBODIES ARE MADE IN RESPONSE TO AN ANTIGEN.	_____	_____	_____
3. ALL PEOPLE INFECTED WITH AIDS LOOK AND FEEL SICK.	_____	_____	_____
4. AIDS IS A PREVENTABLE DISEASE.	_____	_____	_____
5. PEOPLE WITH AIDS ARE PERMANENTLY QUARANTINED.	_____	_____	_____
6. AIDS IS TRANSMITTED BY SHAKING HANDS.	_____	_____	_____
7. PEOPLE WITH AIDS CAN BE CURED WITH MEDICAL CARE.	_____	_____	_____
8. A VACCINE TO PREVENT AIDS IS NOW AVAILABLE.	_____	_____	_____
9. PEOPLE WHO SHARE NEEDLES ARE AT RISK TO GET AIDS.	_____	_____	_____
10. AIDS CAN BE SPREAD BY HOMOSEXUAL INTERCOURSE.	_____	_____	_____
11. AIDS CAN BE SPREAD BY HETEROSEXUAL INTERCOURSE.	_____	_____	_____
12. AIDS CAN BE SPREAD IN FOOD.	_____	_____	_____
13. AIDS CAN BE TRANSMITTED FROM A PREGNANT INFECTED MOTHER TO HER UNBORN CHILD.	_____	_____	_____
14. THE NAMES OF AIDS PATIENTS ARE KEPT CONFIDENTIAL.	_____	_____	_____

15. WHERE HAVE YOU LEARNED THE MOST ABOUT AIDS: (CHECK ONE)

☐ MAGAZINE/NEWSPAPER  
☐ RADIO/TV  
☐ BOOKLET/PAMPHLET

☐ FILM/VIDEO  
☐ LECTURE/TALK  
☐ OTHER (SPECIFY) \_\_\_\_\_

### ANSWERS TO PRETEST

1. True
2. True
3. False
4. True
5. False
6. False
7. False
8. False
9. True
10. True
11. True
12. False
13. True
14. True



NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Basic Fact Finding

**DIRECTIONS:**

Write your answers to the following questions.

WHAT HAVE YOU HEARD ABOUT AIDS?

---

---

HOW DOES A PERSON GET THE AIDS VIRUS?

---

---

HOW DO YOU PREVENT AIDS?

---

---

HOW DID YOU FIND OUT ABOUT AIDS?

---

---

WHAT QUESTIONS DO YOU HAVE ABOUT AIDS?

---

---



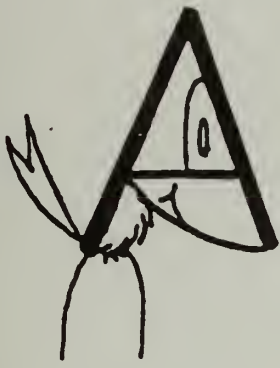
**A** — **Acquired**, from someone else.

**I** — **Immune**, the body's defense system.

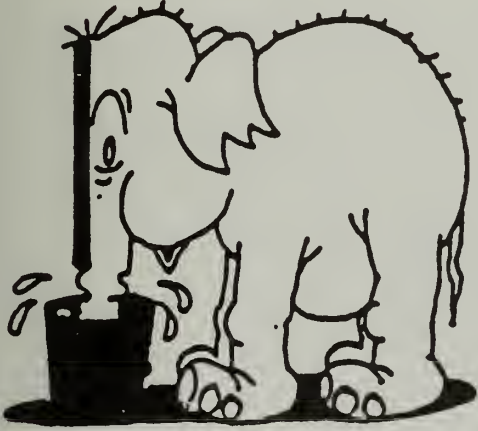
**D** — **Deficiency**, decreased defense.

**S** — **Syndrome**, a set of clinical and laboratory results.





**acquired**



**immune**



**deficiency**



**syndrome**



**cquired**

**mmune**

**eficiency**

**yndrome**





# TEACHER INFORMATION

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## AIDS: THE PREVENTABLE EPIDEMIC GRADES 4-5

### THE IMMUNE SYSTEM

The immune system protects the body from infection. Barriers such as skin and mucous membranes (linings of the inside of the mouth, nose, etc.) that prevent germs from entering the body are an important part of the immune system. Another important part of the immune system is the white blood cell. White blood cells are microscopic and circulate throughout the body in the blood stream. There are many types of white blood cells. Different types have different functions such as engulfing ("eating") bacteria or producing antibodies, which are substances that help kill germs like viruses and bacteria.

### ACTIVITY 1 - HEALTHY IMMUNE SYSTEM

Roles:	Immune System	6-8 students
	Germs	2-3 students
	Antibodies	2-3 students
	Narrator	1 student

Students can use body movement to demonstrate the function of a healthy immune system. Tell students to act out how the immune system works. Split students into groups and have them select their roles. They can form an immune system circle by joining hands. The narrator can stand inside this circle to symbolize how a person's immune system protects one from illness. As germs approach the immune system, persons playing antibodies go out, attach to them, and bring them back to the immune system. As long as the immune system remains intact (the circle remains unbroken) the immune system is able to kill the germ when it comes in contact with it. The immune system remains intact and the person maintains his/her health.

### HUMAN IMMUNODEFICIENCY VIRUS

Human immunodeficiency virus (HIV) is the name of a virus that is able to infect and kill white blood cells. If enough of these cells are killed, the infected person is no longer able to fight off infections. Eventually, even relatively harmless germs that exist normally in the human body are able to cause life-threatening illnesses. When this happens the person is said to have acquired immunodeficiency syndrome, or AIDS.



# TEACHER INFORMATION

**Background** This lesson contains two diagrams of the "Chain of Infection." One is blank and is meant to serve as a generic model. The other is filled in to illustrate the chain of infection for measles. The "Chain of Infection" is designed to help you and your students to recognize how a disease is spread and how the spread of disease can be stopped by breaking the chain at various points.

In the instance of measles, the chain can be broken by the infected person by:

- covering the nose and mouth when sneezing or coughing.

It can be broken by the noninfected person by:

- avoiding contact with secretions
- immunization.

The focus of this lesson is twofold; a person is responsible for:

- breaking the chain of infection in order not to *spread* a disease to others
- breaking the chain of infection in order not to *catch* the disease from others.

**Teacher Vocabulary**

**Host** – Any person in whom an infectious agent can live and multiply.

**Immunization** – Method of producing resistance to an infectious disease, usually by vaccination or inoculation.

**Infectious agent** – An organism (virus, bacteria, etc.) that is capable of producing infection or infectious disease.

**Method of entry** – Manner in which organisms enter the host's body.

**Method of escape** – Manner in which organisms leave the host's body.

**Mode of transmission** – Manner in which an infectious agent is transmitted from one person to another.

**Organism** – Any living thing, such as a virus, bacteria, etc.

**Susceptible host** – A person not possessing sufficient resistance against a particular organism to prevent contracting the infection when exposed to the organism.

**Syllabus Connection** VI Diseases and Disorders – understanding diseases and disorders and taking actions to prevent or eliminate their development. (pp. 28-29)

**Values Integration**

**Respect for self**/caring for and protecting oneself by taking appropriate steps to break the chain of infection

**Respect for others**/caring for and protecting others by taking appropriate steps to avoid the spread of infection



<b>Objective</b>	There are some diseases that are communicable diseases.
<b>Learner Outcome</b>	Understand the chain of infection and how to break it.
<b>Comprehensive Health Education Topic(s)</b>	VI Diseases and Disorders
<b>Values Integration</b>	<p>Respect for Self: Caring for and protecting oneself by taking appropriate steps to break the chain of infection.</p> <p>Respect for Others: Caring for and protecting others by taking appropriate steps to avoid the spread of infection.</p>

---

<b>Motivating Activity</b>	The teacher, with students, will chart the chain of infection.
----------------------------	--

<b>Identification</b>	Students will identify the chain of infection:
-----------------------	--

- infectious agent
- host
- method of escape from host
- mode of transmission
- method of entry into new host
- susceptible host

<b>Effective Communication</b>	Students will chart the chain of infection for measles.
--------------------------------	---

<b>Decision Making</b>	Students will decide how one can break the chain of infection.
------------------------	--

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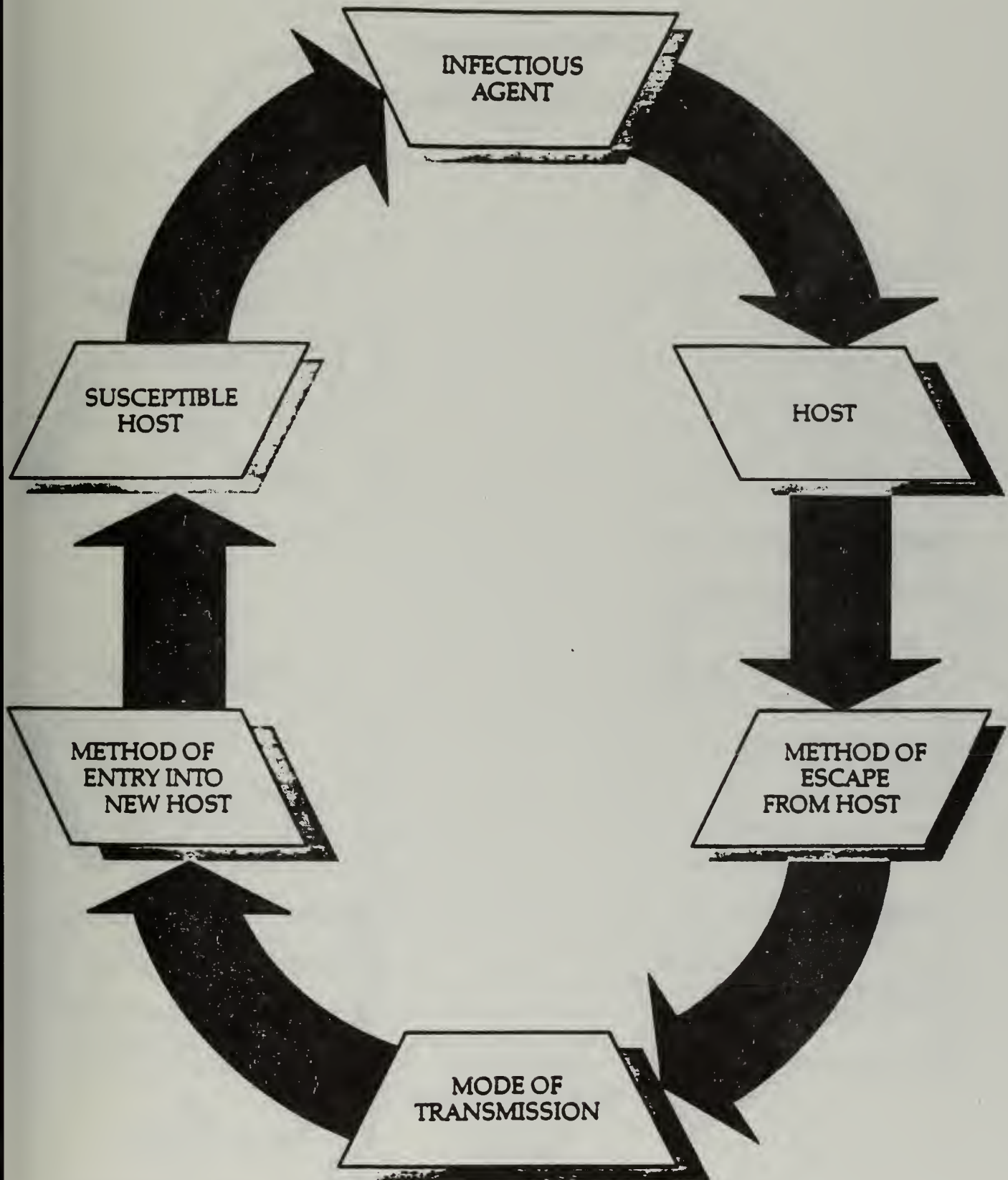
<b>Positive Health Behaviors</b>	Students will demonstrate behavior that seeks to break the chain of infection:
----------------------------------	--

- cover nose and mouth
- avoid contact with secretions from the human host
- obtain appropriate immunization

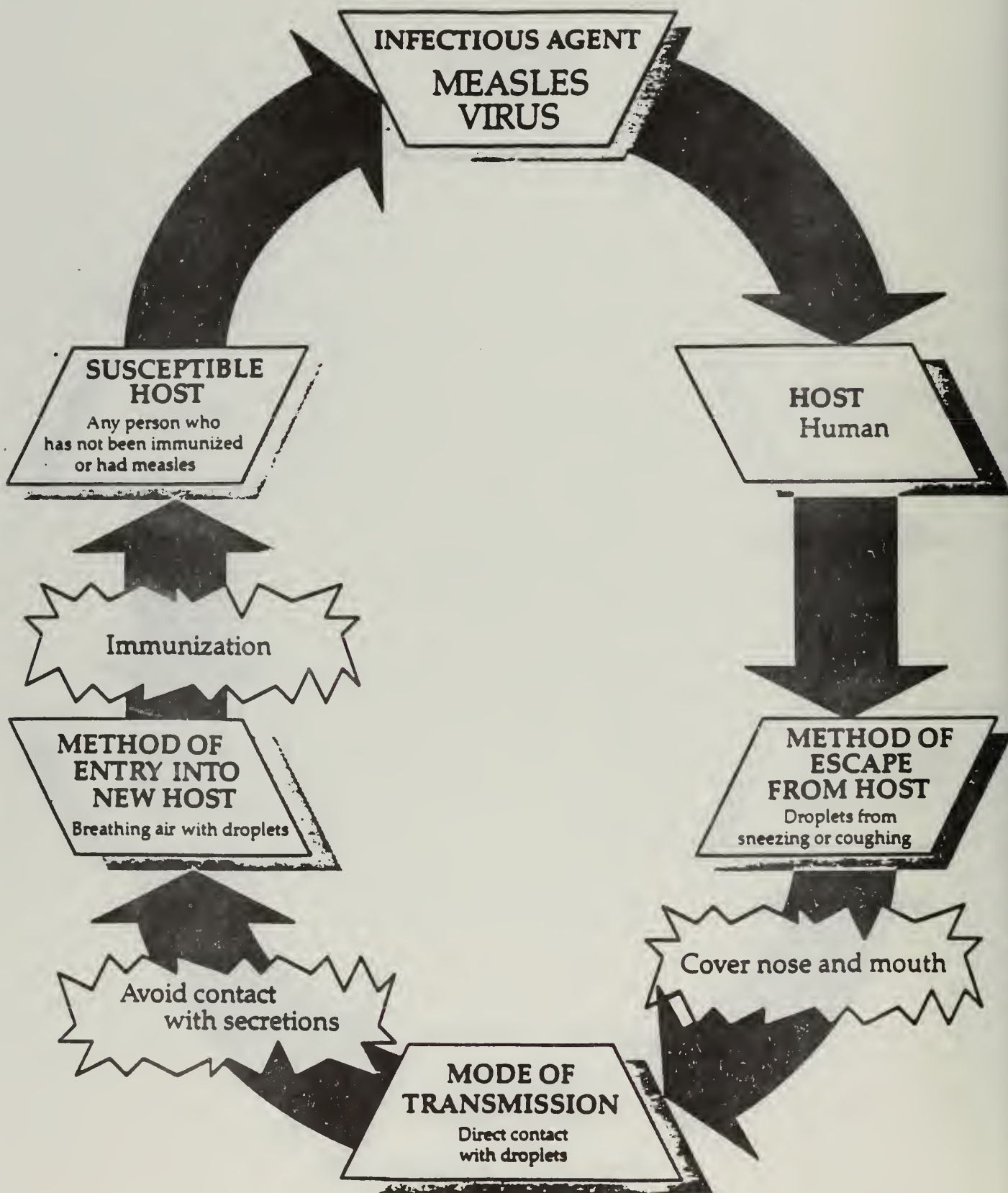




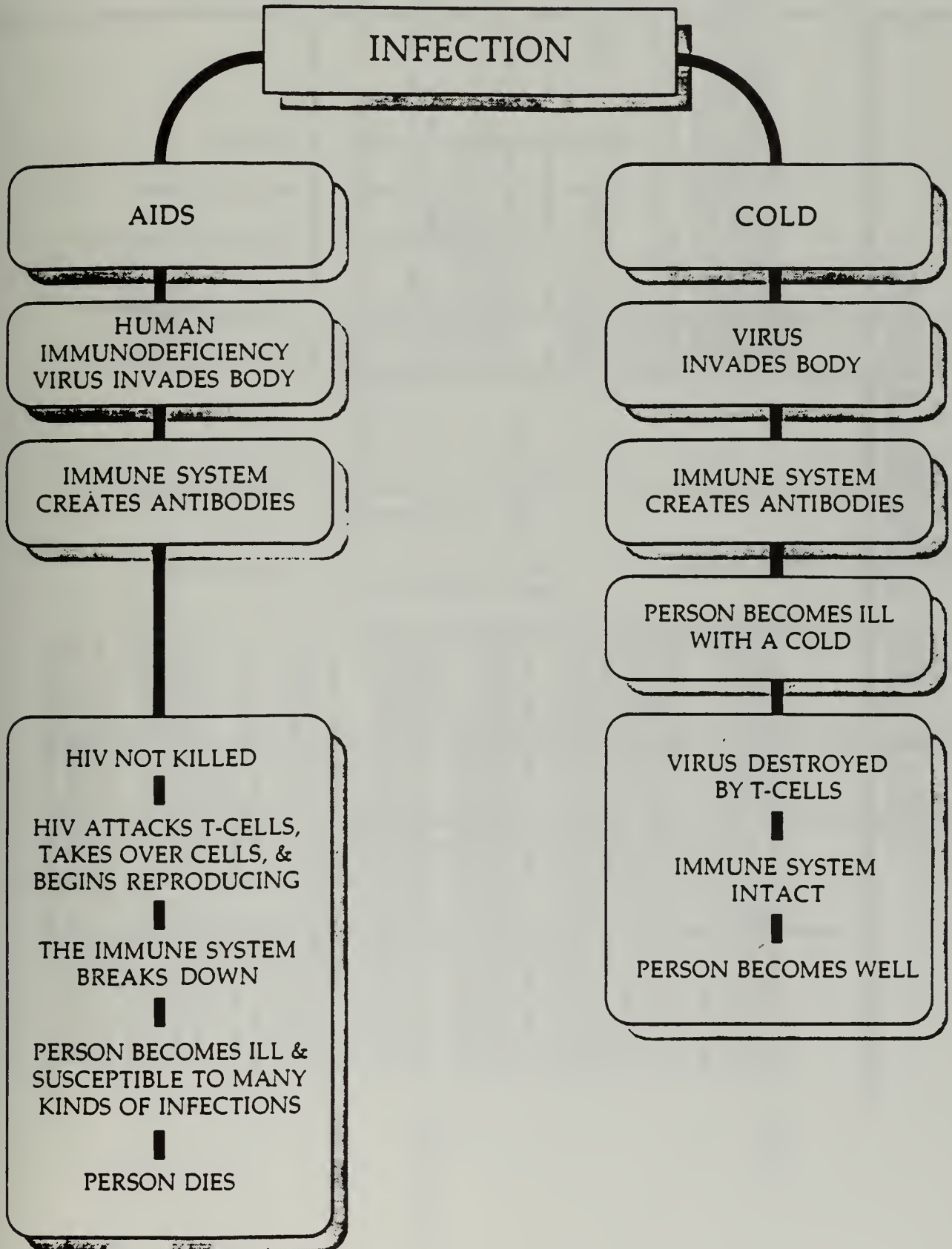
# CHAIN OF INFECTION



# CHAIN OF INFECTION FOR MEASLES



# THE IMMUNE SYSTEM





# TEACHER INFORMATION

## Background

Students need to recognize that with ordinary infections (such as a cold) the body's immune system creates antibodies that kill the virus. During this time the person may feel ill, run fever, etc., but the illness passes and the immune system remains intact and able to fight off other diseases as they occur.

With AIDS (Acquired Immune Deficiency Syndrome) the Human Immunodeficiency Virus (HIV) invades the immune system, which is unable to kill HIV; it is HIV that makes deficient or destroys the immune system. So while a person may feel ill, run fever, etc., and antibodies are created, in the instance of AIDS, the immune system no longer can fight off other diseases as they occur. The patient does not die of AIDS but of an opportunistic infection or disease that the body can no longer fight.

This lesson helps students to distinguish between a healthy immune system (with a large supply of T-cells) that fights off a cold and an immune system with AIDS (with insufficient T-cells) unable to fight off opportunistic infections. Thus, people with AIDS are more likely to contract infections than others. (See diagram.)

## Special Considerations

This lesson is best taught after students have studied science or health topics related to the immune system. If this is not possible, the lesson should be presented at another grade level after basic immune system information has been learned.

## Teacher Vocabulary

**AIDS** – The initials for the disease "Acquired Immune Deficiency Syndrome." A disease caused by a virus which breaks down the body's immune system, making it vulnerable to opportunistic infections and cancer.

**Antibodies** – Substances in the blood produced by the body's immune system to fight against invading organisms.

**HIV** – The Human Immunodeficiency Virus. It causes AIDS by attacking the body's immune system, making infected people vulnerable to fatal infections, cancer, and neurological disorders.

**Immune system** – A body system that helps fight off invading organisms and disease.

**Lymphocyte** – A type of white blood cell that is produced in the bone marrow. Some of these cells migrate to the thymus, where they develop as T-cells. Other lymphocytes that mature in the bone marrow or in organs other than the thymus are called B-cells.

The B-cells manufacture antibodies, and the T-cells regulate antibody production. In healthy people about 60 percent of circulating lymphocytes are T-cells. With AIDS, only about 2 percent of the lymphocytes are T-cells. With fewer T-cells, the body is unable to recognize and attack invading organisms.

**Opportunistic Infection** – An infection caused by a microorganism that rarely causes disease in persons with a normal immune system.

**T-cells** – A class of lymphocytes that play a major role in carrying out the activities of the immune system. Some T-cells are called helper T-cells.

**Virus** – A microscopic organism that can cause infections.

**I Human Growth and Development** – knowing the human body and understanding the characteristics and natural progression of development in the life cycle for taking actions that promote health at each developmental stage. (pp. 18-19)

**VI Diseases and Disorders** – understanding diseases and disorders and taking actions to prevent or limit their development (pp. 28-29)

**Respect for self/proper attention and care for one's health and well-being**

**Respect for self/promoting optimum health through personal behavior**

## Syllabus Connection

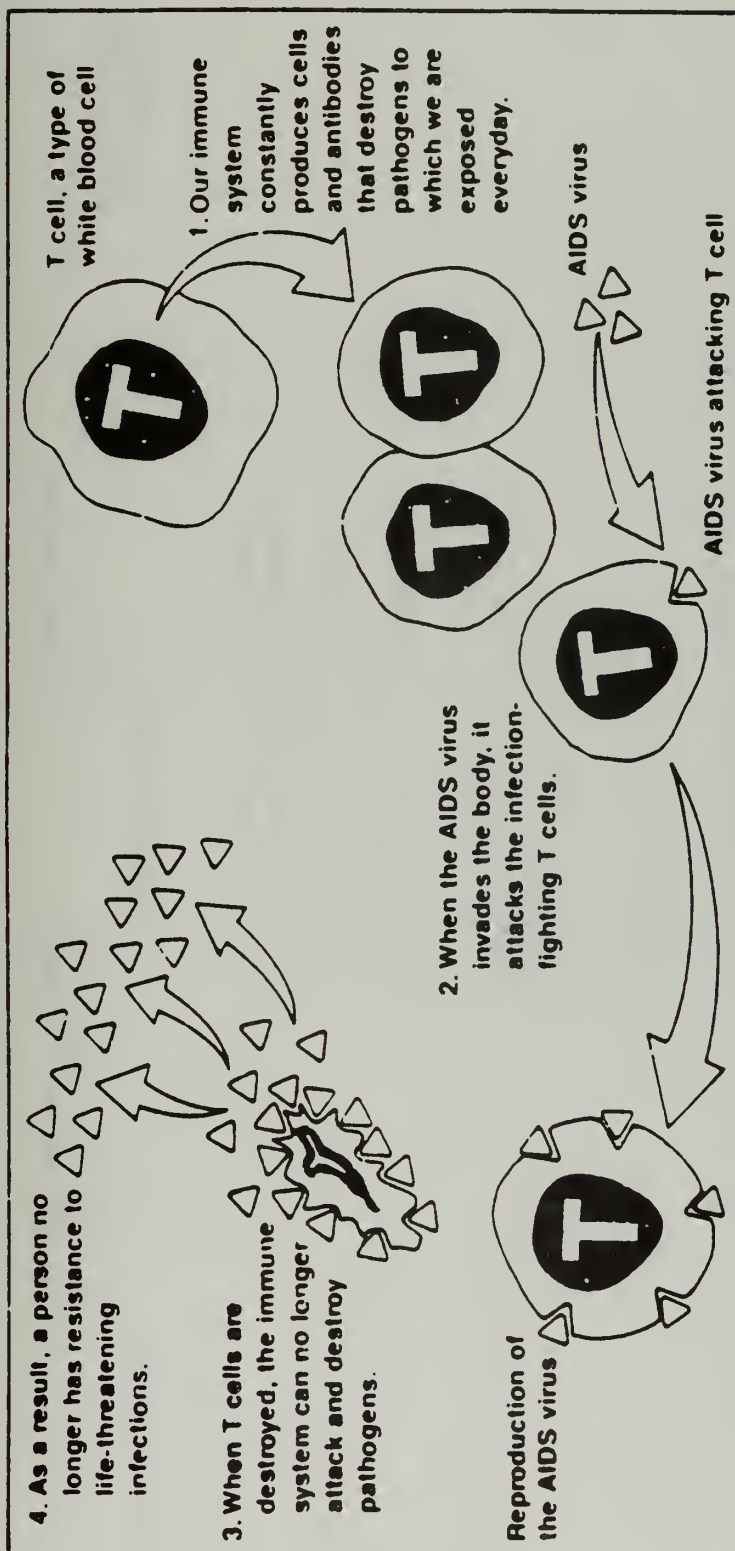
## Values Integration

# TEACHER INFORMATION

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<b>Objective</b>	AIDS is a communicable disease.
<b>Learner Outcome</b>	Understand the body's immune system.
<b>Comprehensive Health Education Topic(s)</b>	VI Diseases and Disorders
<b>Values Integration</b>	Respect for Self: Proper attention and care for one's health and well-being.  Respect for Self: Promoting optimum health through personal behavior.
<b>Motivating Activity</b>	The teacher will diagram the immune system as a defense system against disease.
<b>Identification</b>	Students will identify the body's immune system as a mechanism that helps fight disease.  Students will identify how the immune system responds to: <ul style="list-style-type: none"><li>• a cold</li><li>• AIDS</li></ul>
<b>Effective Communication</b>	Students will describe how the body responds to these different infections.
<b>Decision Making</b>	Students will decide how they can protect their immune system by reducing exposure to infections.
<b>Positive Health Behaviors</b>	Students will reduce their own exposure to infection.





Attack of a T cell by the AIDS virus

**AIDS - What You Should Know**  
 by Linda Meeks and Philip Heit.  
 Merrill Publishing Company, 1988.





## FOURTH GRADE

GOAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Understand personal responsibility in seeking accurate health information.
2. Discuss common misunderstandings about the transmission of the AIDS virus.

1.
  - a. The teacher, with the class, will list resources for accurate health information i.e., community health nurse, school nurse, doctor, clinic or hospital personnel, library, etc.
  - b. The teacher will write each resource on a card. Teams of students will play charades using the cards.

2. Students will complete a myth/fact sheet.

NOTE: Several sample myth/fact sheets are provided.  
(Worksheets 4-E)

3. Students will make a "How AIDS is Spread" chart.  
(Worksheet 4-F)





## AIDS MYTH-FACT SHEET

PLACE A T IN FRONT OF THOSE STATEMENTS THAT ARE TRUE AND AN F IN FRONT OF THOSE STATEMENTS THAT ARE FALSE.

- \_\_\_\_\_ 1. PEOPLE CAN GET AIDS BY BEING IN THE SAME ROOM WITH A PERSON WITH AIDS.
- \_\_\_\_\_ 2. THERE IS A VACCINE TO PREVENT AIDS.
- \_\_\_\_\_ 3. AIDS IS TRANSMITTED BY SNEEZING.
- \_\_\_\_\_ 4. A PERSON CAN GET AIDS BY GIVING BLOOD.
- \_\_\_\_\_ 5. THE AIDS VIRUS CAN BE TRANSMITTED THROUGH SEXUAL CONTACT WITH AN INFECTED INDIVIDUAL.
- \_\_\_\_\_ 6. PEOPLE CAN LOOK AND FEEL HEALTHY AND STILL TRANSMIT THE AIDS VIRUS.
- \_\_\_\_\_ 7. PEOPLE WHO SHOOT DRUGS AND SHARE THE NEEDLE CAN GET AIDS.
- \_\_\_\_\_ 8. AN INFECTED MOTHER CAN TRANSMIT THE AIDS VIRUS TO HER UNBORN CHILD.
- \_\_\_\_\_ 9. PEOPLE CAN GET THE AIDS INFECTION FROM SHARING A SODA.
- \_\_\_\_\_ 10. WOMEN CANNOT TRANSMIT THE AIDS VIRUS.

## ANSWERS TO MYTH - FACT SHEET

1. Myth
2. Myth
3. Myth
4. Myth
5. Fact
6. Fact
7. Fact
8. Fact
9. Myth
10. Myth

NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Myth or Fact

**DIRECTIONS:**

Place an M in front of the statements that is a Myth (a statement that is not true). Place an F in front of the statements that are Facts. Discuss them in class when completed.

\_\_\_\_\_ The AIDS virus can be spread by casual kissing.

\_\_\_\_\_ AIDS is a disease solely of male homosexuals.

\_\_\_\_\_ A mother with AIDS can transmit the virus to her unborn child.

\_\_\_\_\_ AIDS is spread through sharing body fluids infection with the virus.

\_\_\_\_\_ AIDS is a communicable disease.

\_\_\_\_\_ You can get AIDS by sitting next to someone with AIDS.

\_\_\_\_\_ A person with AIDS needs help and understanding.

\_\_\_\_\_ The AIDS virus attacks the body's immune system.

\_\_\_\_\_ Intravenous drug users are at risk for contracting the AIDS virus.

\_\_\_\_\_ People get AIDS by donating blood.

\_\_\_\_\_ There is no cure for AIDS.

**NOTE TO EDUCATOR:**

Purpose: Clarify accurate information about AIDS.

Learner Outcomes: 13,14,18,20,22

Directions: Allow for discussion among students, using a nonjudgmental approach, yet clarifying myth information. Ask students to write statements for each other to assess for myth or fact. Review with students common sources of myths and where to seek accurate information.

KEY: M M F F F M F F F M F





NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS: Myth or Fact

DIRECTIONS:

We've all picked up a lot of information about AIDS. Some of it may be misinformation. Which of the following statements about AIDS do you think are really true? Write true or false on the line provided. Add statements to clarify true statements when needed and correct false statements.

- \_\_\_\_\_ 1. For most people with AIDS in the US, the AIDS virus has been transmitted through heterosexual contact with infected persons.
- \_\_\_\_\_ 2. There is no risk of acquiring AIDS from a blood transfusion.
- \_\_\_\_\_ 3. You can get AIDS from donating blood.
- \_\_\_\_\_ 4. Knowing your sexual partner and their past practices will help prevent the spread of AIDS.
- \_\_\_\_\_ 5. Using birth control pills will prevent the spread of AIDS.
- \_\_\_\_\_ 6. Using a condom will reduce the risk of the spread of AIDS.
- \_\_\_\_\_ 7. AIDS is a disease only gay men acquire.
- \_\_\_\_\_ 8. Being near a person in school who has AIDS can be a risk for transmission of the AIDS virus to you.
- \_\_\_\_\_ 9. Washing your hands often can help destroy the AIDS virus.
- \_\_\_\_\_ 10. You should make sure toilet seats are clean in order to not spread the AIDS virus.
- \_\_\_\_\_ 11. A person who has no symptoms of AIDS can be a carrier of the AIDS virus.
- \_\_\_\_\_ 12. When handling blood or other body fluids, using a barrier will establish a buffer of safety from contact with the AIDS virus.

NOTE TO EDUCATOR:

Purpose: Review misconceptions about AIDS.

Learner Outcomes: 13,14,20,22,27

Directions: Use in small groups so students can work together to verify and correct statements. This is an activity where the students can learn to critique statements carefully and to appreciate precise and accurate information.

Key: 1-F, 2-T, 3-F, 4-T, 5-F, 6-T, 7-F, 8-F, 9-T, 10-F, 11-T, 12-T



## HOW AIDS IS SPREAD

DIRECTIONS: Draw a chart with two columns. Title one column "How We Get AIDS". Title the second column "How We Don't Get AIDS". Cut out cards and paste each card in the correct column.

KISSING SOMEONE	EXCHANGING BLOOD WITH SOMEONE	TOILET SEATS
DOOR KNOBS	SEXUAL CONTACT	SHAKING HANDS
BEING A BABY OF A MOTHER WITH THE AIDS VIRUS	SHARING TOYS	SNEEZING ON SOMEONE
SHARING HYPODERMIC NEEDLES	INSECT BITES	SWIMMING POOLS
WORKING TOGETHER	HUGGING SOMEONE	DISHES OR SILVERWARE



KISSING SOMEONE	EXCHANGING BLOOD WITH SOMEONE	TOILET SEATS
DOOR KNOBS	SEXUAL CONTACT	SHAKING HANDS
BEING A BABY OF A MOTHER WITH THE AIDS VIRUS	SHARING TOYS	SNEEZING ON SOMEONE
SHARING HYPODERMIC NEEDLES	INSECT BITES	SWIMMING POOLS
WORKING TOGETHER	HUGGING SOMEONE	DISHES OR SILVERWARE



## FOURTH GRADE

GOAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:		
1. Discuss how lack of accurate information leads to anxiety, uncertainty, and fear.	1. Have students gather news media articles on HIV infection and community responses.	
	2. Arrange to have a person who is HIV-infected or a medical person present a talk to students.	





## FOURTH GRADE

**GOAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

Students will:

1. Identify local resources which provide accurate information about AIDS.

#### POSSIBLE ACTIVITIES

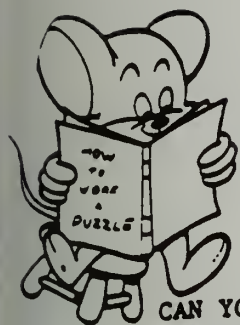
1. The teacher will supply local community resource information.
2. Review vocabulary.  
(Worksheet 4-G)  
Students will complete vocabulary word search.  
(Worksheet 4-H)



# VOCABULARY

ACQUIRED	To get or come to have
AIDS	<u>A</u> cquired <u>I</u> mmune <u>D</u> eficiency <u>S</u> yndrome
ANTIBODIES	Substances that are produced in response to an antigen
BACTERIA	A micro-organism that can cause disease
BEHAVIOR	The way a person acts
CHAIN	A series of things linked together
COMMUNICABLE	Can be transmitted directly or indirectly to another person
DEFICIENCY	Not having enough of something that is needed
DISEASE	A particular destructive process in an organ or organism with a specific cause and symptoms; an illness
EPIDEMIC	The fast spreading of a disease affecting many people
FACT	Something that exists or is true
GERM	Any tiny organism that causes a disease
HEALTHY	Free from illness or disease
IMMUNE	Having a high degree of resistance to a disease
INFECTION	Contaminated with a germ
MYTH	A belief that has no basis in fact
NON-COMMUNICABLE	A disease that cannot be passed from one person to another
SYNDROME	A group of related problems or symptoms
SYSTEM	A group of things acting together
T CELLS	A type of white blood cell that helps fight infection by triggering the production of antibodies
VIRUS	The smallest organisms. They can only reproduce inside a living cell. They cause diseases.





# Word Search

CAN YOU FIND ALL OF THESE WORDS IN THE PUZZLE? THEY MAY BE UP, DOWN, ACROSS, DIAGONAL, OR BACKWARDS. CIRCLE EACH WORD AS YOU FIND IT.

ACQUIRED  
AIDS  
ANTIBODIES  
BACTERIA  
BEHAVIOR  
CHAIN  
COMMUNICABLE

DEFICIENCY  
DISEASE  
EPIDEMIC  
FACT  
GERM  
HEALTHY  
IMMUNE

INFECTION  
MYTH  
NON-COMMUNICABLE  
SYNDROME  
SYSTEM  
TCELLS  
VIRUS

A	W	C	X	E	Y	C	N	E	I	C	I	F	E	D	O	K	U	A	N
C	H	E	W	M	R	E	G	A	N	T	I	B	O	D	I	E	S	E	V
Q	S	Y	S	T	E	M	E	K	J	E	O	I	S	C	J	V	O	J	O
U	W	J	C	M	X	P	G	N	T	V	F	K	R	S	E	I	C	Q	W
I	N	V	Y	T	Z	A	Y	S	M	S	M	A	D	Z	B	R	I	K	A
R	S	T	S	Y	N	D	R	O	M	E	K	O	C	Z	V	U	F	D	Q
E	H	H	L	X	E	Y	Z	E	Z	B	H	O	D	T	Y	S	S	I	D
D	E	L	B	A	C	I	N	U	M	M	O	C	-	N	O	N	H	S	J
L	G	A	U	H	T	Y	E	G	K	A	I	J	C	H	O	Y	N	E	T
S	L	L	E	C	T	P	C	M	J	M	E	O	A	M	K	I	C	A	F
J	T	K	Q	O	I	E	R	P	M	F	M	I	N	H	A	H	K	S	K
S	D	I	A	D	J	O	W	U	N	M	S	N	T	H	Z	E	O	E	U
B	O	K	E	P	I	T	N	J	U	R	W	F	C	Y	Z	A	M	U	L
C	N	M	X	V	U	E	E	N	F	L	R	E	F	H	S	L	O	X	Q
T	I	O	A	W	D	I	I	Q	G	C	E	C	A	Q	S	T	J	R	A
C	S	H	D	J	F	C	O	R	T	I	Q	T	L	T	S	H	S	Q	D
Z	E	V	U	O	A	B	A	C	T	E	R	I	A	J	D	Y	V	O	E
B	K	F	B	B	U	H	M	Y	S	G	T	O	X	T	N	X	S	U	K
R	M	L	L	S	C	K	H	P	G	O	D	N	P	F	C	L	V	E	R
N	M	E	A	A	E	R	Y	V	K	M	L	X	S	B	M	R	B	I	Z

## Answers to Word Search

A	W	C	X	E	Y	C	N	E	I	C	I	F	E	D	O	K	U	A	N
C	H	E	W	M	R	E	G	A	N	T	I	B	O	D	I	E	S	E	V
Q	S	Y	S	T	E	M	E	K	J	E	O	I	S	C	J	V	O	J	O
U	W	J	C	M	X	P	G	N	T	V	F	K	R	S	E	I	C	Q	W
I	N	V	Y	T	Z	A	Y	S	M	S	M	A	D	Z	B	R	I	K	A
R	S	T	S	Y	N	D	R	O	M	E	K	O	C	Z	V	U	F	D	Q
E	H	H	L	X	E	Y	Z	E	Z	B	H	O	D	T	Y	S	S	I	D
D	E	L	B	A	C	I	N	U	M	M	O	C	-	N	O	N	H	S	J
L	G	A	U	H	T	Y	E	G	K	A	I	J	C	H	O	Y	N	E	T
S	L	L	E	C	T	P	C	M	J	M	E	O	A	M	K	I	C	A	F
J	T	K	Q	O	I	E	R	P	M	F	M	I	N	H	A	H	K	S	K
S	D	I	A	D	J	O	W	U	N	M	S	N	T	H	Z	E	O	E	U
B	O	K	E	P	I	T	N	J	U	R	W	F	C	Y	Z	A	M	U	L
C	N	M	X	V	U	E	E	N	F	L	R	E	F	H	S	L	O	X	Q
T	I	O	A	W	D	I	I	Q	G	C	E	C	A	Q	S	T	J	R	A
C	S	H	D	J	F	C	O	R	T	I	Q	T	L	T	S	H	S	Q	D
Z	E	V	U	O	A	B	A	C	T	E	R	I	A	J	D	Y	V	O	E
B	K	F	B	B	U	H	M	Y	S	G	T	O	X	T	N	X	S	U	K
R	M	L	L	S	C	K	H	P	G	O	D	N	P	F	C	L	V	E	R
N	M	E	A	A	E	R	Y	V	K	M	L	X	S	B	M	R	B	I	Z



**F i f t h**

**G r a d e**



## FIFTH GRADE

GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Explain the structure and function of the reproductive system.

1. This topic is usually addressed at the fifth-grade level in most school systems' health or science curriculum.



## FIFTH GRADE

GOAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Discuss the importance of making responsible decisions that promote good health.

1. Students will learn to identify risks and consequences in order to develop strategies for prevention.  
(Teacher Information pp. 126-131)



# TEACHER INFORMATION

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## AIDS: THE PREVENTABLE EPIDEMIC GRADES 4-5

The first lesson explores the importance of making healthy decisions and preventing risks. These are two key components in the prevention of many diseases including AIDS. Students will learn to identify risks and consequences in order to develop strategies for prevention. Responsible decision making methods are presented as a foundation for the prevention of many risks and consequences students will be confronted with now and in the future. The concepts of risks, consequences and prevention are an important theme to reinforce throughout the entire unit.

### RESPONSIBLE DECISION MAKING

Listed below are the five steps of responsible decision making. Present the information using vocabulary and phrases appropriate to the level and understanding of your students.

1. Identify the problem or situation.
2. Identify ways to deal with the problem.
3. Apply criteria for responsible decision making to each alternative:

Would the results of my decision be healthful?

Would the results of my decision be safe?

Would the results of my decision be legal?

Would the results of my decision show respect for myself and others?

Would the results of my decision follow my parents's or guardian's guidelines?

4. Make a responsible decision and act upon it.
5. Evaluate your actions.





# TEACHER INFORMATION

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## AIDS: THE PREVENTABLE EPIDEMIC GRADES 4-5

### OBJECTIVES:

The learner will demonstrate the ability to

- Analyze a list of risk and no risk behaviors that can jeopardize one's health.
- Synthesize risk behaviors and methods for their prevention.

### MATERIALS:

"Risk, No Risk" Student Worksheet, Page

### VOCABULARY:

Risk, consequence, prevention, responsible, decision, respect

### PROCEDURES:

1. Write the word **RISK** on the board or overhead projector and ask students to brainstorm the meaning of the concept. List several ideas and define. Repeat this procedure with the words **CONSEQUENCES** and **PREVENTION**.
2. Tell the students that the purpose of today's lesson is to demonstrate how, by avoiding risks, one can prevent the consequences of unhealthy behavior.
3. Divide the class into partners or small groups. Tell students to read the items on the worksheet and decide what behaviors pose a risk to one's health.
4. When the students finish with the first directive, allow discussion time as a class about the risks, whether individual group members agreed and disagreed and if they resolved their differences of opinion.
5. In their groups, have students look at the risks and list possible consequences of the behaviors.
6. Involve students in a discussion to express their ideas about possible consequences. List their comments on the board or overhead.
7. Review for the students the process of their activity: They have determined what behaviors put them at risk and their consequences. Explain to them that they have completed the first steps in responsible decision making.
8. Involve the students in the next steps to responsible decision making which leads to prevention.



**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 4-5**

**RISK, NO RISK STUDENT WORKSHEET**

**Directions:** Read the list of behaviors below. Decide if they are a risk or not a risk to your health by marking an X in one of the columns below.

After you have marked your answer, explain why you think it is or is not a risk to your health.

**RISK**

**NO RISK**

**1. Skateboarding**

**Explain Your Answer:**

**2. Drinking alcohol.**

**Explain Your Answer:**

**3. Drinking pop.**

**Explain Your Answer:**

Risk. No Risk Student Worksheet  
continued....

**RISK**

**NO RISK**

4. Sitting next to someone with AIDS.

Explain Your Answer:

5. Being a "couch potato."

Explain Your Answer:

6. Using tobacco.

Explain Your Answer:

7. Using someone's comb.

Explain Your Answer:

8. Washing your hands with cold water.

Explain Your Answer:

## TEACHER'S KEY

### AIDS: THE PREVENTABLE EPIDEMIC GRADES 4-5

#### RISK, NO RISK STUDENT WORKSHEET

**Directions:** Read the list of behaviors below. Decide if they are a risk or not a risk to your health by marking an X in one of the columns below.

After you have marked your answer, explain why you think it is or is not a risk to your health.

Answers may vary from student to student. Opinions should be supported by the explanation given.

RISK

NO RISK

1. Skateboarding.  
Explain Your Answer:
2. Drinking alcohol.  
Explain Your Answer:
3. Drinking pop.  
Explain Your Answer:
4. Sitting next to someone with AIDS.  
Explain Your Answer:
5. Being a "couch potato."  
Explain Your Answer:
6. Using tobacco.  
Explain Your Answer:
7. Using someone's comb.  
Explain Your Answer:
8. Washing your hands with cold water.  
Explain Your Answer:
9. Visiting a friend that has chickenpox.  
Explain Your Answer:

Add your own risk or no risk behavior here.

10.  
Explain Your Answer:

**Risk. No Risk Student Worksheet**  
**continued....**

**RISK**

**NO RISK**

9. Visiting a friend that has chickenpox.

**Explain Your Answer:**

Add your own risk or no risk behavior here.

10.

**Explain Your Answer:**



## FIFTH GRADE

COAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Explain the importance of taking responsibility for oneself and others.
2. Explain the importance of self-respect.

1. Expand Goal II activities.



## FIFTH GRADE

COAL IV: Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Discuss state resources which provide accurate information about AIDS.

1. Contact for information:  
Communicable Disease Project  
Division of Public Health  
SD Department of Health  
523 East Capitol  
Pierre, SD 57501  
(605)773-3364



**S i x t h**

**G r a d e**



## SIXTH GRADE

COAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Understand the modes of transmission of HIV (Human Immunodeficiency Virus) and other STDs (Sexually Transmitted Disease).

1. Using information provided, student worksheets, and transparency masters, teachers will design an appropriate unit. (Teacher Information pp. 136-149)





# TEACHER INFORMATION

## AIDS: THE PREVENTABLE EPIDEMIC GRADES 6-8

### ORIGINS OF THE AIDS EPIDEMIC

No one knows for certain where or how the AIDS epidemic began. It is known that some people in Africa were infected at least as early as the 1960's. (This is known because blood specimens collected then, stored frozen, and tested recently, have shown evidence of the infection.) It is possible that the virus infected humans in Africa for many years before this first known proof of infection.

Some scientists believe HIV may have entered the human population from monkeys that contain a similar virus. This could have happened if an infected monkey bit a person or if a person was somehow accidentally exposed to an infected monkey's blood such as by skinning a monkey in preparation for cooking.

AIDS was first recognized in the U.S. in 1981. It is now realized, however, from testing of stored blood specimens, that some people in the U.S. were infected as early as the mid-1970's.

The number of AIDS cases in the U.S. has increased rapidly since 1981. It is important to remember that the disease has a long incubation period, or time between first being infected with the virus and developing clinical symptoms of disease. Many of the persons developing AIDS today were infected more than five years ago. Persons infected since then may still be asymptomatic.

### THE IMMUNE SYSTEM

The immune system functions to protect the body from infection. It acts both to prevent infection and to reduce the severity of disease when infections occur. Barriers such as skin and mucous membranes that prevent germs from entering the body are an important part of the immune system. Another major component of the immune system is the white blood cell. White blood cells, which are made in the bone marrow, are microscopic and circulate throughout the body in the blood stream. There are many types of white blood cells. Different types have different functions such as engulfing bacteria or producing poisons to kill parasites.

One type of white blood cell (called a B-lymphocyte) makes antibodies, which are specific molecules that attach to and help kill infecting microorganisms (pathogens) like viruses and bacteria. In general, it is this production of antibodies that results in immunity and the ability to prevent repeated re-infection by the same pathogen.

Another type of white blood cell is the T-lymphocyte. A major function of T-lymphocytes is to control the activity of other white blood cells, and specifically to help activate cells such as B-lymphocytes when an infection is present and to deactivate them when the infection has been controlled.

### THE EFFECT OF HIV ON THE IMMUNE SYSTEM

After HIV enters the body, the virus recognizes and infects one of the types of white blood cells that comprise the immune system. The specific cell that HIV infects is called the T4 helper lymphocyte; T4 helper lymphocytes are the cells that help activate the immune system when the body becomes infected. After infecting a T4 lymphocyte, HIV may remain dormant for a variable period of time. For reasons that are not yet known, the virus may then reactivate, begin reproducing, and kill the T4 cell. If sufficient numbers of T4 cells are killed, the infected person's ability to activate the immune system may diminish or be lost and he or she may become increasingly unable to fight off infections. Eventually, the immune system becomes so impaired that even relatively harmless microorganisms that exist normally in the human body are able to cause life-threatening illnesses.

### HOW HIV IS SPREAD

Since HIV is usually found in blood, semen, and vaginal/cervical secretions of infected persons, it follows that contact with one of these fluids can result in the acquisition of HIV infection. The most common way that the HIV is transmitted is by sexual intercourse. HIV can be transmitted sexually from man to man, man to woman, and woman to man. The second most common way that HIV is transmitted is by the sharing of IV drug needles that have become contaminated with blood of a user who is infected. A third way that HIV can be transmitted is through the blood of an infected mother to her fetus or newborn. In the past, people who received blood transfusions or blood products occasionally developed AIDS because the person who donated the blood was infected with HIV. Since 1985, all blood donated in this country has been screened for HIV infection. Blood that is found to be infected is discarded and is not transfused.

### HOW HIV IS NOT SPREAD

HIV is transmitted from one person to another only by sexual or blood contact. HIV has not been transmitted by other types of contact that are more casual in nature. A number of studies have evaluated whether persons who have lived for extended periods of time in the same home as someone with AIDS are at risk for contracting the disease. These persons have shared meals, bathrooms, and have hugged and kissed AIDS patients. In spite of this direct contact (often for many years), these household

contacts have not become infected with HIV. If HIV is not spread within households, then it is not spread in other settings in which there is less direct contact, such as schools or businesses.

There is no evidence that mosquitoes or other biting insects can transmit HIV infection. Although small amounts of the virus have been found in tears and saliva, infection following exposure to tears or saliva has not been reported. HIV is easily destroyed by heat, disinfectants, and drying. Sitting by a person with AIDS, holding hands, or using a telephone or public restroom does not put you at risk for AIDS.

### HIV/AIDS MYTHS AND FACTS

Myths are statements commonly believed to be true, but that are really false.

Some myths about HIV and AIDS:

1. HIV is spread by casual contact (coughs, shaking hands, sharing objects such as a magazine).
2. HIV is spread by mosquitoes or other biting insects.
3. The cause of AIDS is unknown.
4. All persons with HIV, ARC and AIDS are adults.
5. If you learn that someone is infected with HIV, has ARC or AIDS you should stay as far away from them as possible.

The facts:

1. HIV is only spread by close sexual contact or by exposure to blood. An infected person's blood or other body fluids must contact an uninfected person's bloodstream for transmission to occur.
2. Mosquitoes are not involved in the spread of HIV, nor are any other biting insects.
3. The cause of AIDS is a virus, human immunodeficiency virus. This virus reproduces within the infected person's immune system.
4. Although most persons with HIV, ARC and AIDS are adults, the disease also may occur in children if the child is born to an infected mother or receives contaminated blood or blood products. It may also occur in teens who are exposed by sexual contact or needlesharing.
5. Since HIV is not spread casually, don't be afraid to be close to an AIDS patient. You can hug them and be their close friend without risk of catching the disease.

### SYMPTOMS OF AIDS AND ARC

The symptoms of AIDS and ARC develop as HIV progressively kills white blood cells and the immune system becomes unable to fight off infections and other illnesses. The difference between AIDS and ARC is primarily one of severity of immune system dysfunction. A person is given a diagnosis of ARC when they develop illnesses that indicate that their immune system is not functioning properly. Persons with ARC may be quite sick and may die without ever developing AIDS. A patient is given a diagnosis of AIDS when their immune system has become so affected that they develop one of several specific conditions that indicate critical immune system impairment. Most commonly, these specific conditions are infections caused by bacteria or other micro-organisms that normally live in the body but are unable to cause illness when the immune system is working normally. These organisms take advantage of a special circumstance or opportunity to cause disease, and thus the infections they cause are often called "opportunistic" infections. In persons with AIDS, these infections are usually life-threatening.

Symptoms of AIDS may be quite variable and will depend on which opportunistic infection a patient develops. For example, if pneumonia were to occur, symptoms would include persistent or unusual cough and shortness of breath. A gastrointestinal infection might cause chronic, unexplained diarrhea. Other symptoms that can be associated with AIDS include persistent unexplained fever or lymph node swelling.

An important point to emphasize is that these symptoms may also be caused by many other, less serious illnesses. No one who has these symptoms should assume that they have ARC or AIDS without seeing a doctor to be checked for these other, less serious, and usually curable causes.

### SPECTRUM OF DISEASE CAUSED BY HIV "Iceberg Phenomenon"

The concept of an iceberg can be used to help explain the types of illness caused by HIV. It is best to discuss the AIDS cases first as the "tip of the iceberg." AIDS cases represent a small minority of the infected population. Next is ARC, which is perhaps 5-10 times as common as AIDS. Finally, there is the large percentage of persons, "under the water," who are HIV positive, and asymptomatic carriers. As the epidemic progresses, carriers and persons with ARC may progress to AIDS and recently infected persons will take their place.

### IMPLICATIONS OF THOSE WHO ARE ASYMPTOMATIC

An individual cannot tell whether it is safe to have sex with or to share needles with another person by looking for signs of illness or by asking the other person if he or she is healthy. Most infected persons have no symptoms or outward signs of illness, and most do not know, themselves, that they are infected.



## AIDS: THE PREVENTABLE EPIDEMIC GRADES 4-8

### OBJECTIVES:

The learner will demonstrate the ability to

- Comprehend how human immunodeficiency virus is transmitted.
- Analyze the effect of HIV on the immune system.
- Describe characteristics of AIDS-related complex (ARC) and AIDS.

### MATERIALS:

Student Fact Sheet, Page

Chain of Infection Student Worksheet, Page

Transparencies on HIV, Epidemiology, Iceberg and Transmission, Pages

### VOCABULARY:

Immune system, HIV, ARC, AIDS, antibody, lymphocyte, T4 helper lymphocyte cells, asymptomatic, sexual contact, fetus

### PROCEDURES:

- 1 As a small group activity, ask students to exchange their chain of infection assignments, review them for accuracy and discuss them. After this activity, review as a whole class.
- 2 Explain to the students that the purpose of today's lesson is to learn more about the chain of infection with the disease AIDS. They will review the function of the immune system and discover the spectrum of disease caused by HIV invading that system.
- 3 Involve the students in a discussion on the origins of the AIDS epidemic. Use the transparency that shows the growth of cases to demonstrate why AIDS is considered an epidemic.
- 4 Introduce the words AIDS, HIV, immune system, virus, T4 helper lymphocyte cells, lymphocyte, and antibody. Use these concepts as a foundation to discuss the immune system, and how HIV is the virus in a chain of infection that effects the immune system.
- 5 Monitor student understanding by randomly calling on students to explain the agent, reservoir and host for AIDS.
- 6 Use the transparencies on HIV transmission to discuss method of spread for HIV. Review how other diseases such as hepatitis B and STD's are spread in a similar manner. Further discuss how HIV is not spread. If time permits students may want to discuss myths associated with the spread of HIV and other communicable diseases.

7. As a review of concepts learned, ask students to work with a partner and develop the AIDS chain of infection. The worksheet from Lesson 1 can be used or students can create their own.

### Suggested Braining Point

8. Go over previous information by sharing chain of infection charts.
9. Pass out the Student Fact Sheet. Allow time for students to read. Use the fact sheet as a foundation for the rest of the lesson.
10. Explain to students that as a result of HIV infection, there are three stages of disease progression. Use the iceberg transparency to discuss the spectrum of disease caused by HIV. Involve students with a discussion on the largest infected population being asymptomatic. Students may want to address issues such as how the iceberg will change after the healthy carriers progress to ARC and AIDS and if this will have a greater impact on availability of services.
11. Describe the HIV antibody test and its availability through county health departments and other health clinics. Other resources for AIDS treatment can be presented using the curriculum resource section.
12. Assign students the task of designating a brochure or other visual on a topic of his or her choice. Topics could include:  
AIDS-What it is and why it is a serious disease.  
AIDS-A Communicable Disease.  
AIDS-Myths and Facts.  
AIDS and ARC-Symptoms and Danger.
13. Show students visual examples from health departments and other agencies. Allow time for brainstorming of ideas with the class on content, style and materials needed to complete their projects.

### EVALUATION:

Criteria for evaluating visuals can include accuracy and clarity of information, creativity and organization.

## TEACHER INFORMATION - Lesson 2

### THE HIV ANTIBODY TEST

When HIV infects a person, antibodies to fight the infection are produced by B-lymphocytes. Unfortunately, unlike most other antibodies, the antibodies against HIV are usually not effective in helping the body destroy this virus. This is at least partly because the virus can escape from antibodies by hiding inside the T4 lymphocyte.

Antibodies against HIV will persist indefinitely in the blood of persons who have been infected and can be detected by several different types of blood tests. These tests are called HIV antibody tests. A positive test means that antibodies against HIV are present and indicates that the person has been infected at some time in the past with HIV. The HIV test is not perfect and occasionally uninfected people test positive and infected people test negative. HIV antibody tests do not indicate whether a person has AIDS or ARC or will develop these conditions in the future.

**AIDS: THE PREVENTABLE EPIDEMIC**  
**GRADES 6-8**

**STUDENT FACT SHEET**

<b>DISEASE:</b>	Acquired Immunodeficiency Syndrome
<b>CAUSE:</b>	Human Immunodeficiency Virus (HIV)
<b>SYMPTOMS:</b>	<p>Mild flu-like symptoms may occur during the first few weeks after a person is infected with HIV. Following these symptoms, persons who are infected may remain well for indefinite periods of time.</p> <p>ARC (AIDS-related complex or conditions) occurs months to years after becoming infected with HIV. Symptoms of ARC may include chronic, unexplained recurrent infections associated with weight loss, fever, swollen glands, and diarrhea.</p> <p>AIDS (acquired immunodeficiency syndrome) occurs many years after becoming infected with HIV, (sometimes 5 years or longer). AIDS is diagnosed when an HIV infected person develops specific opportunistic infections including, pneumonia, fungal infections, herpes; specific cancers, wasting syndrome (tremendous weight loss) and HIV dementia.</p>
<b>HOW AQUIRED:</b>	HIV is spread through direct contact with an infected person's blood, semen, or vaginal/cervical secretions. This can occur by sexual contact, sharing needles while shooting drugs, from an infected mother to fetus or newborn, and in the past, by blood transfusions.
<b>DIAGNOSIS:</b>	A physical examination and laboratory tests showing an impaired immune system, unusual infections and unusual cancers are required for an AIDS diagnosis. Blood tests for HIV antibodies also assist in the evaluation.
<b>TREATMENT:</b>	There is no cure for HIV infection, ARC or AIDS. Infections and cancers that affect AIDS patients may be treatable.
<b>COMPLICATIONS:</b>	Usually fatal. The life expectancy of a person with AIDS has been approximately 18 months after diagnosis. This may be lengthened by a drug called AZT that has recently become available.
<b>PREVENTION:</b>	There is no vaccine against AIDS. Everyone must take personal responsibility to see to it that they do not become infected. This includes avoiding behaviors that put you at high risk such as having sex with multiple partners and sharing needles.

## TEACHER INFORMATION - Lesson 2

### THE HIV ANTIBODY TEST

When HIV infects a person, antibodies to fight the infection are produced by B-lymphocytes. Unfortunately, unlike most other antibodies, the antibodies against HIV are usually not effective in helping the body destroy this virus. This is at least partly because the virus can escape from antibodies by hiding inside the T4 lymphocyte.

Antibodies against HIV will persist indefinitely in the blood of persons who have been infected and can be detected by several different types of blood tests. These tests are called HIV antibody tests. A positive test means that antibodies against HIV are present and indicates that the person has been infected at some time in the past with HIV. The HIV test is not perfect and occasionally uninfected people test positive and infected people test negative. HIV antibody tests do not indicate whether a person has AIDS or ARC or will develop these conditions in the future.

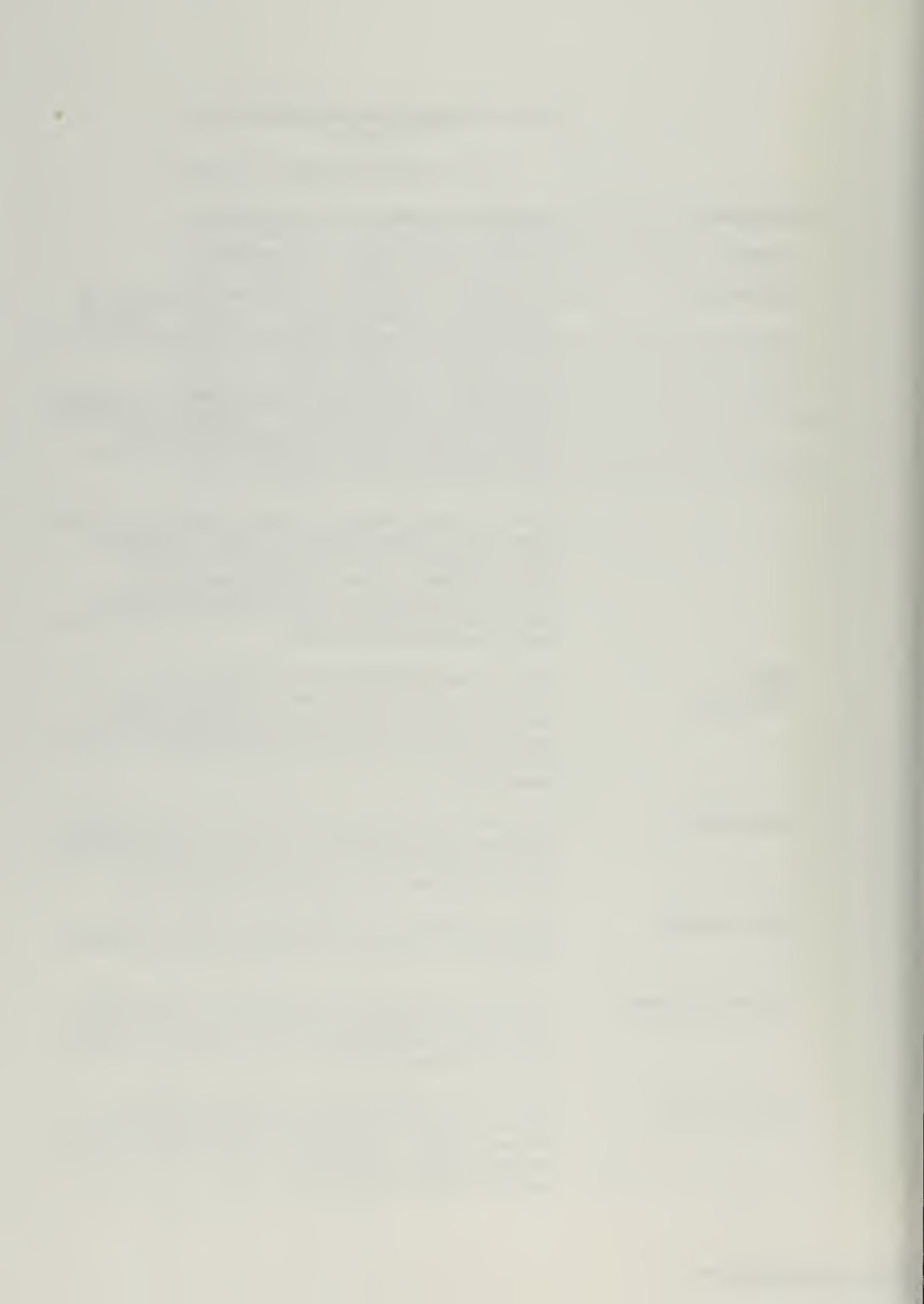


**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 6-8**

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**AIDS: THE PREVENTABLE EPIDEMIC**  
**GRADES 6-8**

**CHAIN OF INFECTION**  
**STUDENT WORKSHEET**

**AGENT**

Agent: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RESERVOIR**

Reservoir: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Directions:** Use this worksheet to complete the chain of infection for the diseases hepatitis A, hepatitis B and AIDS.

Methods of Spread: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**METHOD OF SPREAD**

**HOST**

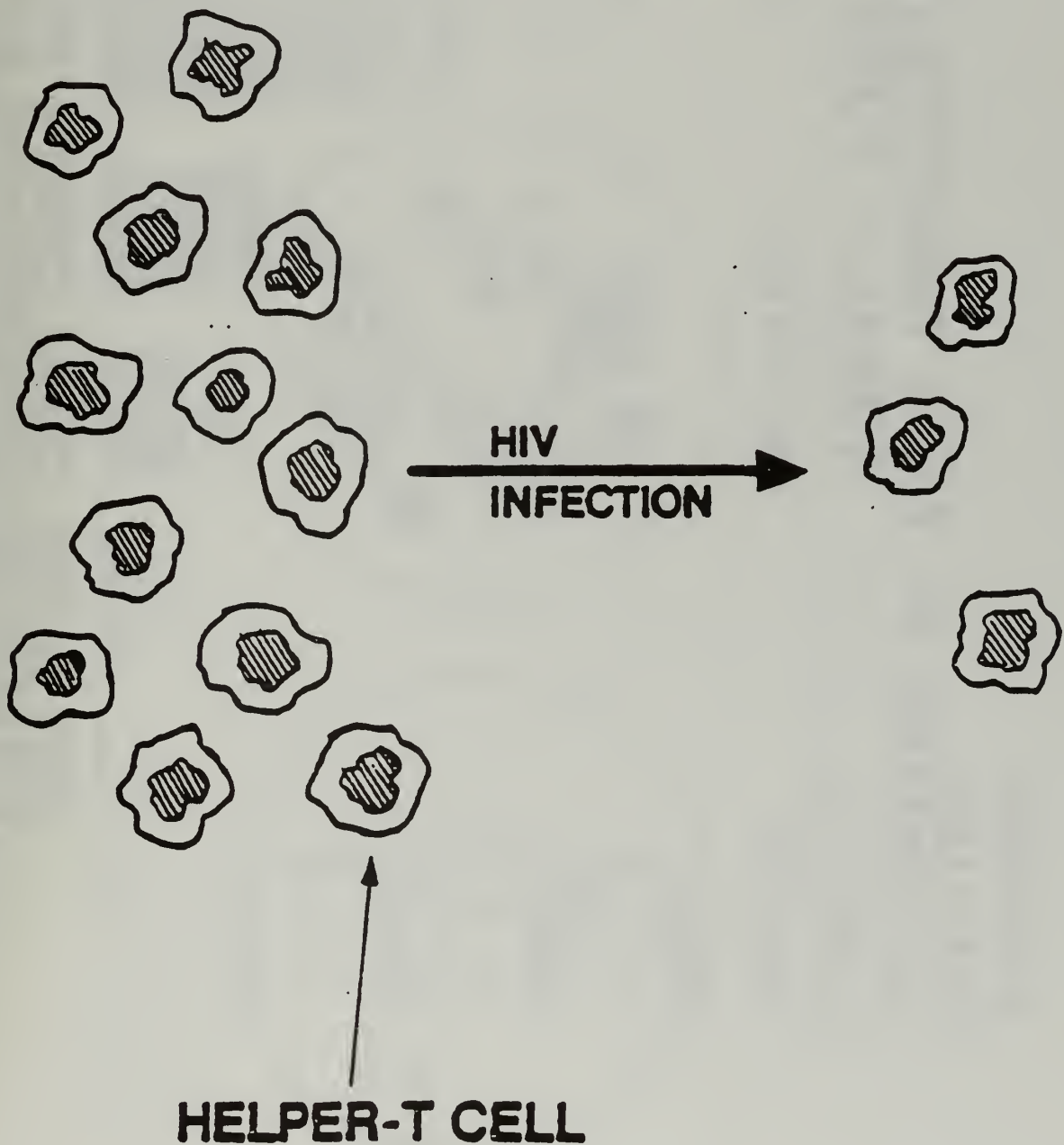
Host: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## AIDS VIRUS

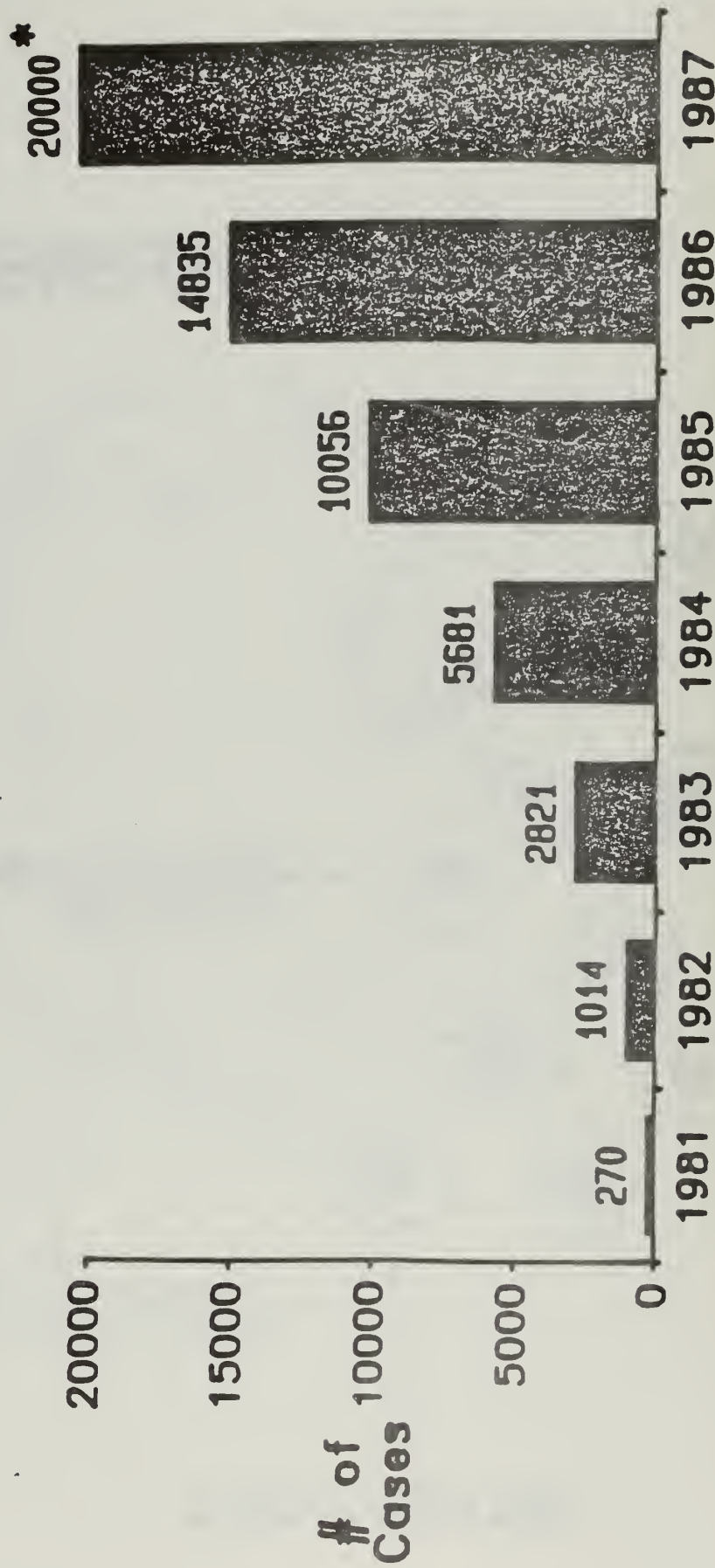


HELPER-T CELL

# REDUCED DEFENSES



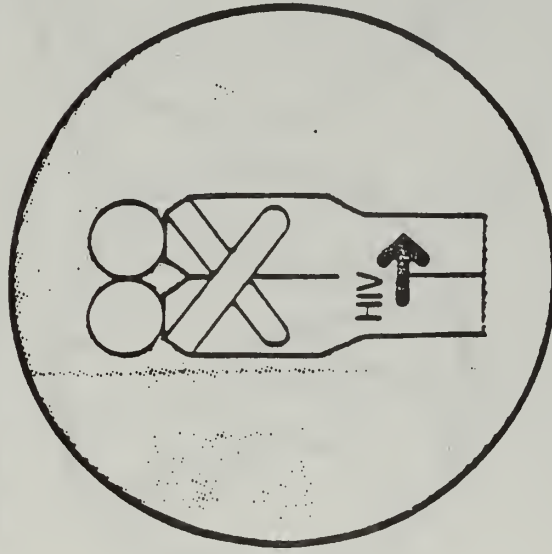
# Cases of AIDS reported in the U.S., 1981 - 1987



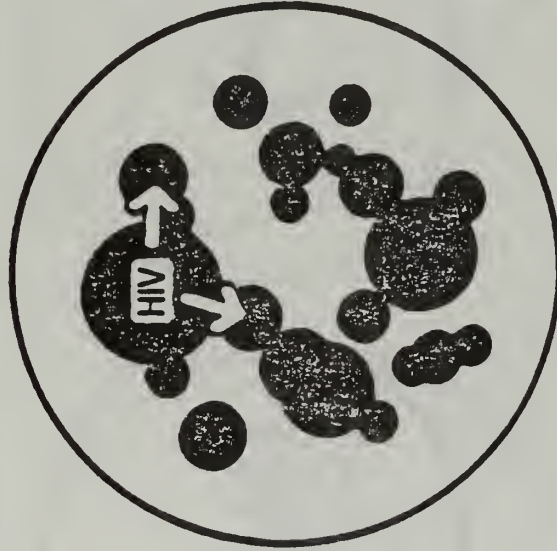
Year (\* Final case count for 1987 is projected)



# HIV is spread by:



**SEXUAL  
CONTACT  
WITH AN  
INFECTED  
PERSON**



**INFECTED  
BLOOD**

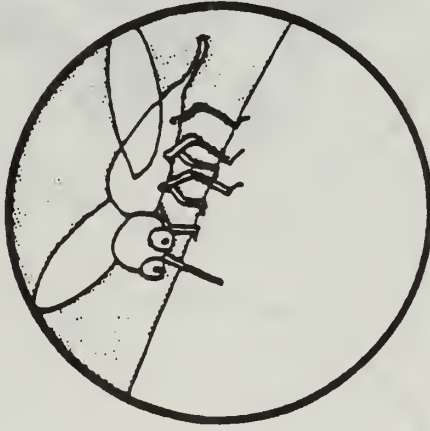


**FROM INFECTED  
MOTHER  
TO FETUS/NEWBORN**

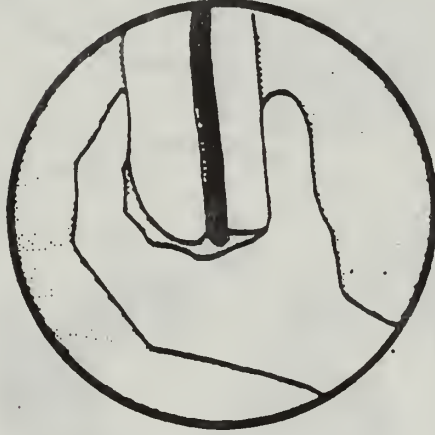
# **HIV is not spread by:**



**COUGHS/  
SNEEZES**



**INSECTS**



**FOOD  
HANDLERS**

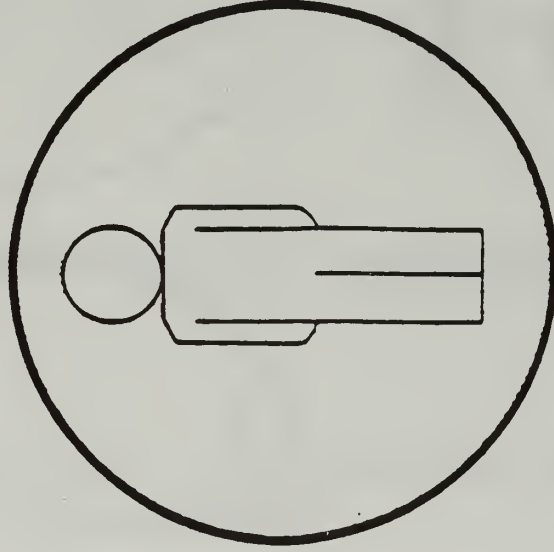


**HANDSHAKES,  
HUGS**

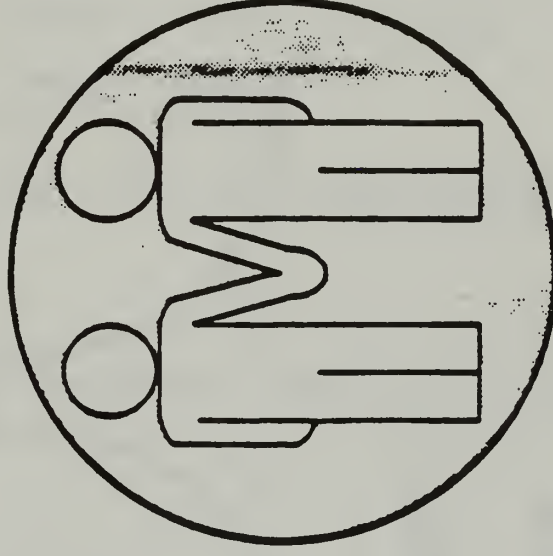
**...casual contact**

# Preventive Measures:

## Sex



**ABSTINENCE**

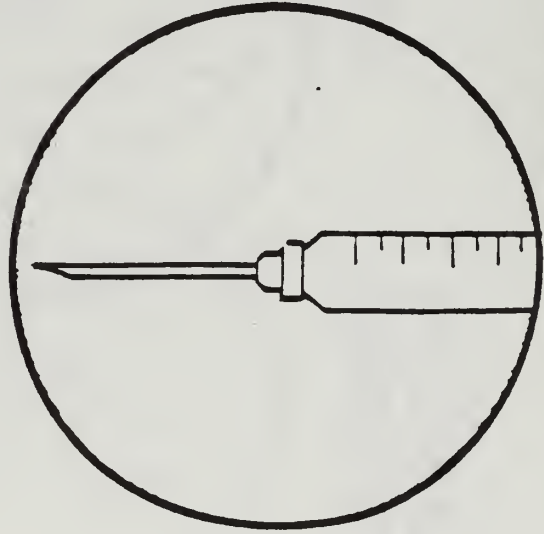


**MONOGAMY**

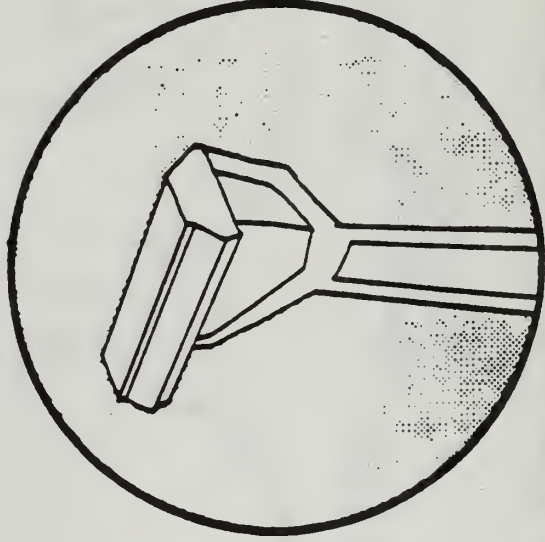


# Preventive Measures: Blood

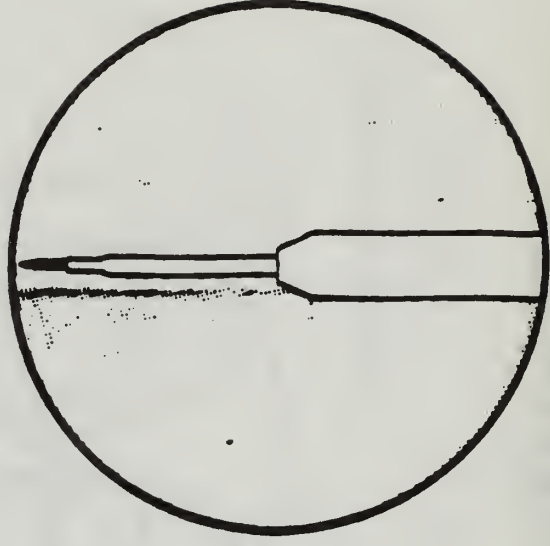
DON'T SHARE...



NEEDLES

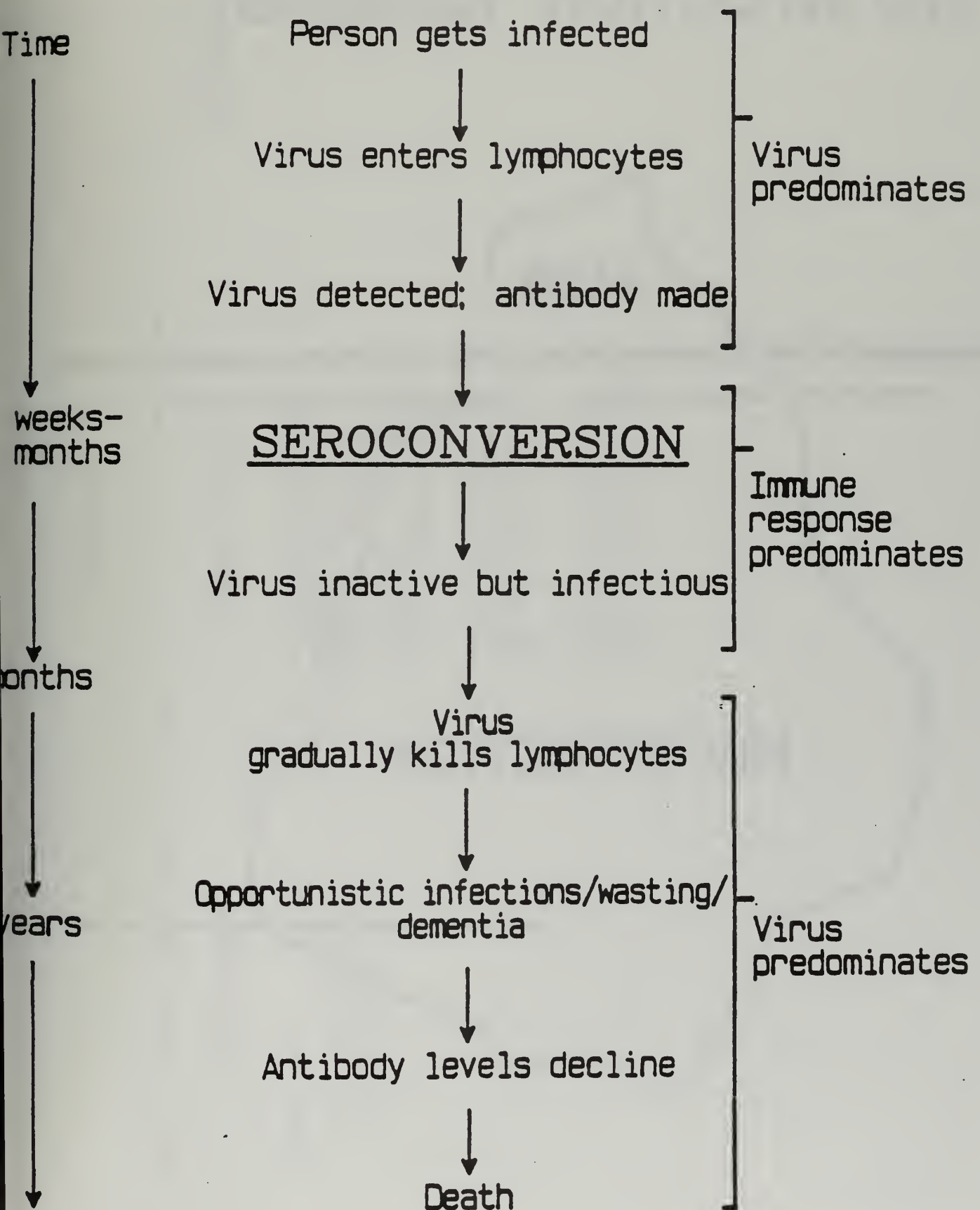


RAZORS

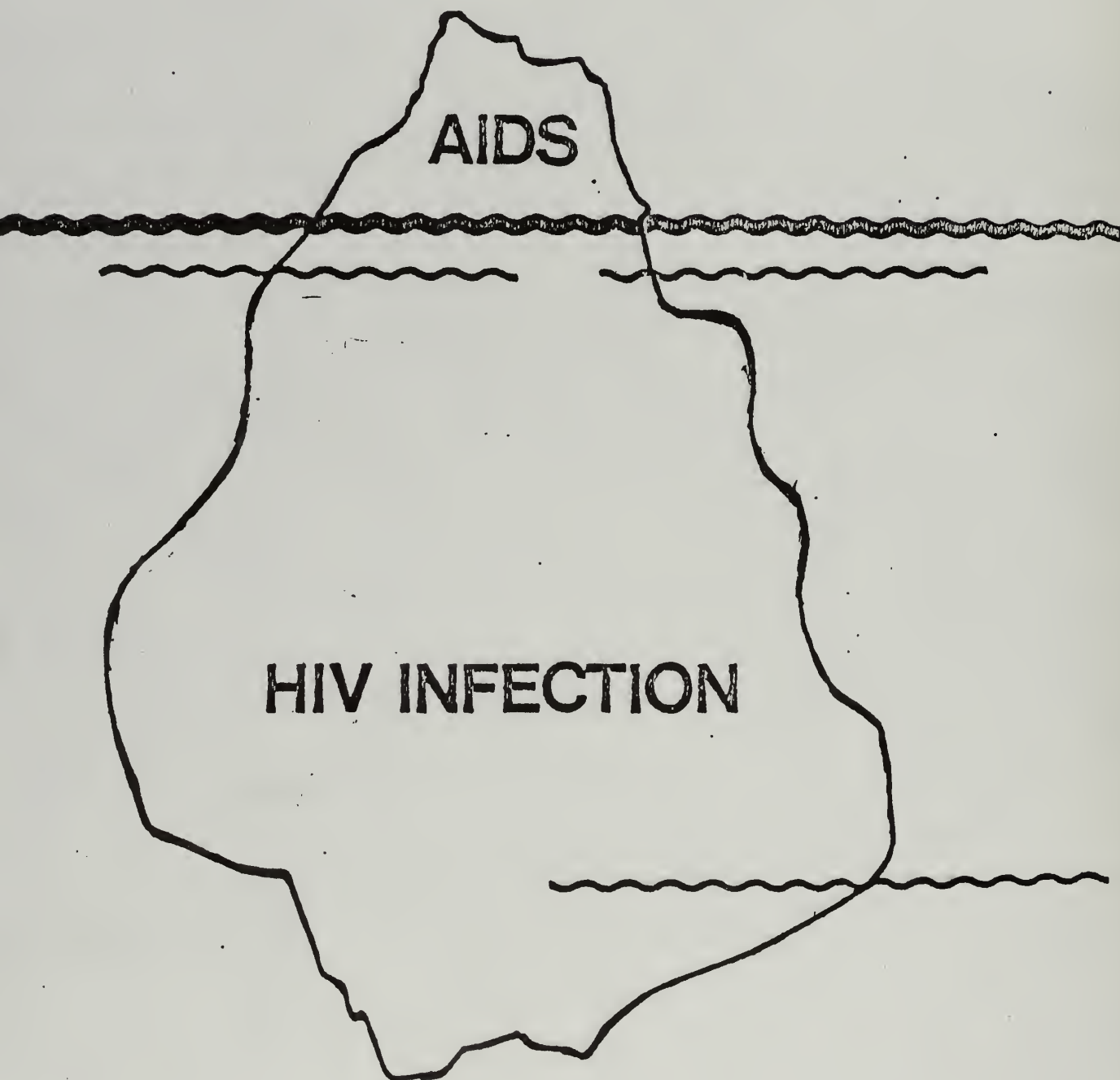


TATTOO  
INSTRUMENTS

# HIV Disease Progression



# HIV INFECTION "ICEBERG"



## SIXTH GRADE

COAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Review and practice decision-making skills.

1. Using existing curriculum materials (thinking skills, drug and alcohol abuse prevention, "Skills for Adolescence", and guidance) the teacher will provide practice in decision-making skills.
2. Students will complete a risk-assessment survey. (Teacher Information pp. 151-156)
3. Students will discuss and practice ways to say "no". (Teacher Information pp. 157-161)



# TEACHER INFORMATION

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## AIDS: THE PREVENTABLE EPIDEMIC GRADES 6-8

### OBJECTIVE:

The learner will demonstrate the ability to comprehend the high, low and no risk behaviors pertaining to HIV transmission.

### MATERIALS:

Risk Assessment Survey, Pages

### VOCABULARY:

Abstinence, monogamy, sexual contact, masturbation, condom

### PROCEDURES:

1. As a review, ask students to quiz each other on the definitions for the categories listed on the Student Fact Sheet they received in the previous lesson.
2. Write **HIGH RISK** on the board or overhead. Ask students to explain what high risk means and examples of high risk behaviors.
3. Involve students in a brief discussion about why people engage in high risk activity.
4. Explain to students that the purpose of today's lesson is to move away from the factual information and begin to personalize the impact of the epidemic. Tell the class that the one way to prevent AIDS and infection with HIV is to be able to understand what puts one at risk for becoming infected and if at risk, changing that behavior to prevent infection.
5. Assign the risk factor worksheet to be completed by small groups. Go over terminology as needed. Each group member will be expected to identify high, low and no risks and provide justification for his or her answer. Groups will then present their ideas to the rest of the class.
6. Go over answers with the class involving ideas from all of the groups.
7. Ask students to provide ways infections can be broken through behavior change. Explain to students that by using this knowledge, they can discover ways to change high risk behaviors. Based on the groups' answers on the risk survey, tell them to prepare proposals for behavior change on each item of medium to high risk. Each group will share one prevention proposal with the rest of the class.





# AIDS: THE PREVENTABLE EPIDEMIC GRADES 6-8

## HIGH RISK, NO RISK STUDENT SURVEY

HIV is spread through behaviors. Read the list below and decide which behaviors can put you at risk for HIV infection. Discuss and justify your answers. Put an "X" on the line to show where you think the behavior fits on the scale of high to low to no risk.

<u>Behavior</u>		High <u>Risk</u> 5	4	Low <u>Risk</u> 3	2	1	No <u>Risk</u> 0
1.	Sexual contact with more than one partner. Explain your answer:	<----/----/----/----/----/---->					
2.	Sharing IV drugs. Explain your answer:	<----/----/----/----/----/---->					
3.	Hugging, holding hands. Explain your answer:	<----/----/----/----/----/---->					
4.	Abstinence from sexual contact. Explain your answer:	<----/----/----/----/----/---->					
5.	Earpiercing. Explain your answer:	<----/----/----/----/----/---->					
6.	Sitting by a person with AIDS. Explain your answer:	<----/----/----/----/----/---->					
7.	Donating Blood. Explain your answer:	<----/----/----/----/----/---->					
8.	Being bitten by a mosquito. Explain your answer:	<----/----/----/----/----/---->					
9.	Sneezing, coughing and sweating. Explain your answer:	<----/----/----/----/----/---->					
10.	Sharing razors. Explain your answer:	<----/----/----/----/----/---->					
11.	Deep or french kissing. Explain your answer:	<----/----/----/----/----/---->					



High Risk, No Risk Student Survey  
cont.....

	<u>Behavior</u>	High <u>Risk</u>		Low <u>Risk</u>		No <u>Risk</u>
		5	4	3	2	1 0
12.	Reusing needles that have been cleaned. Explain your answer:	<----/----/----/----/---->				
13.	Monogamy. Explain your answer:	<----/----/----/----/---->				
14.	Practicing abstinence from sex and drugs. Explain your answer:	<----/----/----/----/---->				
15.	Thinking, "AIDS won't affect me." Explain your answer:	<----/----/----/----/---->				
16.	Sexual contact between two people without a condom. Explain your answer:	<----/----/----/----/---->				
17.	Sexual contact between two people using a condom. Explain your answer:	<----/----/----/----/---->				
18.	Masturbation. Explain your answer:	<----/----/----/----/---->				

**TEACHER'S KEY****AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 6-8  
HIGH RISK, NO RISK STUDENT SURVEY**

HIV is spread through behaviors. Read the list below to decide which behavior can put you at risk for HIV. Discuss and justify your answers. Put an "X" on the line to show where you think the behavior fits on the scale of high to low to no risk.

<u>Behavior</u>	High		Low		No	
	Risk		Risk		Risk	
	5	4	3	2	1	0

1. Sexual contact with more than one partner.

X X  
<----/----/----/----/---->

As a person increases their number of sexual partners, their chances also increase of having sexual contact with someone infected with HIV. Risk can be reduced by lifetime monogamy or by the use of a condom.

2. Sharing IV drugs.

X X  
<----/----/----/----/---->

Sharing intravenous drugs is a high risk behavior in the spread of HIV. If someone is infected and shares their needle and syringe with another person, blood that contains HIV on the needle or the syringe can be directly injected into the other person's bloodstream and infect them.

3. Hugging, holding hands.

X  
<----/----/----/----/---->

AIDS is not spread through casual contact.

4. Abstinence from sexual contact.

X  
<----/----/----/----/---->

This is a 100% effective prevention behavior for the sexual contact spread of HIV.

5. Earpiercing.

X X  
<----/----/----/----/---->

If all needles are properly sterilized, there is no risk for the spread of HIV. However, if the instruments are not sterilized, there is some risk.

6. Sitting by a person with AIDS.

X  
<----/----/----/----/---->

AIDS is not spread by casual contact.

**TEACHER'S KEY**  
**High Risk, No Risk Student Survey**  
**cont.....**

**Behavior**

High	Low	No
Risk	Risk	Risk
5	4 3 2	1 0
		X

7. Donating Blood.

<----/----/----/----/---->

There is no risk in donating blood. All equipment used is sterilized, used once and then destroyed.

8. Being bitten by a mosquito.

	X
<----/----/----/----/---->	

No cases of HIV infection resulting from mosquito bites have been reported. If mosquitoes were a source of transmission for HIV, many more children and other persons without risk factors would be infected.

9. Sneezing, coughing, and sweating.

	X
<----/----/----/----/---->	

There have not been any cases of transmission caused by these actions.

10. Sharing razors.

	X
<----/----/----/----/---->	

A potential for blood to blood contact is possible.

11. Deep or french kissing.

	X
<----/----/----/----/---->	

Considered low to no risk. Since a small amount of virus was found in the saliva of one HIV infected person out of a study group of 71, it is recommended, however, that those who are at high risk for HIV infection refrain from this type of kissing.

12. Reusing needles that have been cleaned.

	X X
<----/----/----/----/---->	

Close to no risk if the needles have been properly cleaned by following specific guidelines consistently. However, the risk increases as the sterilization procedures decrease in efficiency.

13. Monogamy.

	X X
<----/----/----/----/---->	

No risk if it is a mutually monogamous relationship for life as long as neither partner is infected from needle use.

**TEACHER'S KEY**  
**High Risk, No Risk Student Survey**  
**cont....**

<u>Behavior</u>	High Risk		Low Risk		No Risk	
	5	4	3	2	1	0

14. Practicing abstinence for sex and drugs. X  
 <----/----/----/----/----/---->

100% effective in the prevention of HIV

15. Thinking, "AIDS won't affect me." X  
 <----/----/----/----/----/---->

Denial can lead to making choices that are high risk in the spread of HIV.

16. Sexual contact between two people without a condom. X X  
 <----/----/----/----/----/---->

Unprotected sex with a partner can put one at risk for HIV especially if it is a casual encounter or if personal and/or sexual histories are unknown.

17. Sexual contact between two people using a condom. X X  
 <----/----/----/----/----/---->

The condom is designed to prevent the exchange of body fluids that can contain HIV such as vaginal/cervical secretions and semen. However, condoms can fail if used improperly. They need to be used correctly and for every contact.

18. Masturbation X  
 <----/----/----/----/----/---->

Masturbation is a safe outlet for releasing sexual tension and is not a risk behavior for the transmission of HIV.



**CATEGORY:**

Substance Use and Abuse

**GRADE LEVEL:** 4-6**OBJECTIVE:**

Identify and practice strategies to "Say No To Drug/Alcohol Use".

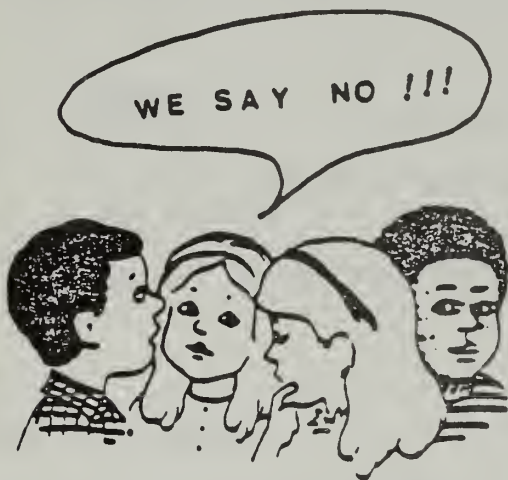
**EXPLANATION FOR THE TEACHER**

Many young people find themselves in situations that pressure them to use drugs, alcohol, or smoke. A survey of any class of fourth, fifth, or sixth graders would reveal that most of the students have tasted alcohol, may have tried a cigarette, and are familiar with names of illegal and legal drugs. Factors that influence the initiation into alcohol, drugs, and smoking include parent influence (example), sibling and peer pressures, and media exposure, including advertising. Young people need to identify and practice various strategies to say "No" to those pressures. Humor, being assertive, using your credit, changing the subject, recruiting a friend, and delaying the decision can be used to respond to pressures to use drugs, alcohol, or tobacco.

**GETTING READY:**

Ask if anyone has been asked to taste beer, wine, or liquor by a friend. How about trying a cigarette or pot or some pill or other drug?

Discuss peer pressure, parental influence, older sibling pressure, and effects of the media and advertising on drug/alcohol/tobacco use.

**ACTIVITIES**

Duplicate Handout #1, "How to Say No!!" Have students divide into groups of 2 or 3 to identify additional responses under each strategy.

Duplicate Handout #2, "Prepare Your Reply". Distribute at least one situation card to each group of two students. Have students prepare a reply. Then have students role play the situation and response. Can the rest of the class identify the strategy used?

**LET' TALK:**

Which strategy did the students like the best? Could you use these strategies in other situations to say "No"?

Duplicate some of the responses from the students and have them identify which strategy was used.

Form a "Just Say No Club", if there is interest.







# HOW TO SAY "NO"

## Steps to Take

1. Stop and Think. Is this something you want to do or is someone else pressuring you to do it.
2. Decide on a way (strategy) to say "No".
3. Repeat your strategy if it doesn't work the first time or try another one.

## WAYS TO SAY "NO"

### Humor

#### Example:

"C'mon. Have a smoke."

Reply: "No thanks! I'm not a chimney."

### Use Your Credit

This way questions your friendships--do you like me for me or only if I drink, smoke or use drugs?

#### Examples:

"You mean I have to drink to be your friend?"

"I like you and want to be around you, but not if I have to smoke."

"No, you should not force me to pop a pill."

### Delay the Decision

This way avoids the decision to drink or not to drink, to smoke or not smoke, to take a drug or not take drugs.

#### Examples:

"I don't want to try it right now."

"Do I have to try it now?"

"I don't feel like it right now."



## PREPARE YOUR REPLY

---

### Situation #1

### Reply

You are visiting your cousin for the weekend. Your cousin offers you a can of beer.

---

### Situation #2

### Reply

You and your friends are on the way home from school. You stop at the store. Your friend buys a pack of cigarettes and offers you one.

---

### Situation #3

### Reply

You are at a friend's house for a pajama party. During the evening some pills are passed around.

---

### Situation #4

### Reply

You meet a group of your friends at a local park. You see several of your friends smoking. One friend offers you "pot".

---

Situation #5

Reply

A party is in progress at a friend's house. You are invited to drink some "spiked" punch.

---

Situation #6

Reply

You and a friend are watching a television program in which all the glamorous stars are smoking. Your friend suggests that you would look older if you took up smoking.

---

Situation #7

Reply

You feel "blah" at school. Your friend hands you a pill and says "this will pick you up".

---

Situation #8

Reply

You are at football game with your brother. A bottle is being passed around. You are asked to take a drink.

## CHANT

(Clap hands in rhythm with the words.)

Just say "no"  
Just say "no"  
Just say "no"  
To drugs

Just say "no"  
Just say "no"  
Just say "no"  
To alcohol

Just say "no"  
Just say "no"  
Just say "no"  
To drugs

You say "no"  
I say "no"  
We say "no"  
To drugs

You say "No"  
I say "No"  
We say "No"  
To alcohol

(Repeat as often as needed.)



## SIXTH GRADE

COAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

Students will:

1. Discuss the abuse of alcohol and drugs as it affects behavior.

#### POSSIBLE ACTIVITIES

1. The teacher will insure that this discussion is covered by the drug and alcohol abuse prevention curriculum.

To locate your local prevention resource center contact:  
Department of Health  
Division of Alcohol and Drug Abuse  
523 East Capitol  
Pierre, SD 57501  
(605)773-3123





## SIXTH GRADE

**COAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Understand the role of the Centers for Disease Control in health promotion and disease control.

1. Using the information provided, the teacher will lead a class discussion on the scope of CDC activities.  
(Teacher Information pp. 164-166)

2. Together the class will write one letter requesting information from the CDC.

NOTE: Address letter to:  
Centers for Disease Control  
Public Health Service  
U.S. Department of Health and  
Human Services  
Atlanta, GA 30333



# TEACHER INFORMATION

**Dateline: CDC**

SPECIAL ISSUE

## Providing the Knowledge and Tools for Prevention

Effective public health programs are often a matter of having the right tools to do the job and trained professionals who know how to use them. The Training and Laboratory Program Office plays an important part in both.

The Office trains the nation's force of public health workers in the latest disease prevention techniques. This force includes federal, state and local public health workers, as well as others from academia, professional and voluntary organizations.

The Office develops educational materials that use a variety of electronic and print media in support of disease prevention and health promotion programs. It also supports the nation's clinical laboratories, training laboratory workers in the use of the latest diagnostic techniques and providing programs to assure that the results of laboratory testing are reliable.

## The Public Health Service: A Heritage of Disease Prevention

The Public Health Service has its origins in the Marine Hospital Service established in 1796 by President John Adams. The nation's concern for the health of its mariners grew into concern that the American fleet would bring home disease.

As waves of immigrants began arriving from Europe's crowded cities, cholera, smallpox, and particularly yellow fever spread throughout the United States killing millions. Continuing epidemics led to the passage of the Act of 1893 — an important milestone in preventive medicine — and made the Service responsible for protecting the young nation from infectious diseases brought from overseas.

Because city and state departments of health wanted help with these new national health

problems, Congress acted. To make the Service more professional, it created the Commissioned Corps and made it responsible for preventing the transmission of infectious diseases between states.

To more accurately reflect its responsibilities, the Marine Hospital Service was renamed the Public Health Service in 1912. During the two World Wars, it became part of the military forces so that the Commissioned Corps

could be detailed more easily to emergency areas, to other agencies, or to the United Nations Relief and Rehabilitation Administration.

When the wartime malaria control program became the Public Health Service's Communicable Disease Center in 1946, it was assigned responsibility for traditional PHS programs: controlling infectious diseases; immunizing children against smallpox, diphtheria and other killers; controlling sexually transmitted diseases; preventing the spread of tuberculosis; and operating the quarantine program.

Today the PHS is the health component of the Department of Health and Human Services and is headed by the Assistant Secretary for Health and the Surgeon General, who commands the Commissioned Corps.

CDC is the PHS agency responsible for promoting health and preventing disease.



## Surveillance and Epidemiology: the Keys to Disease Prevention

never seen before.

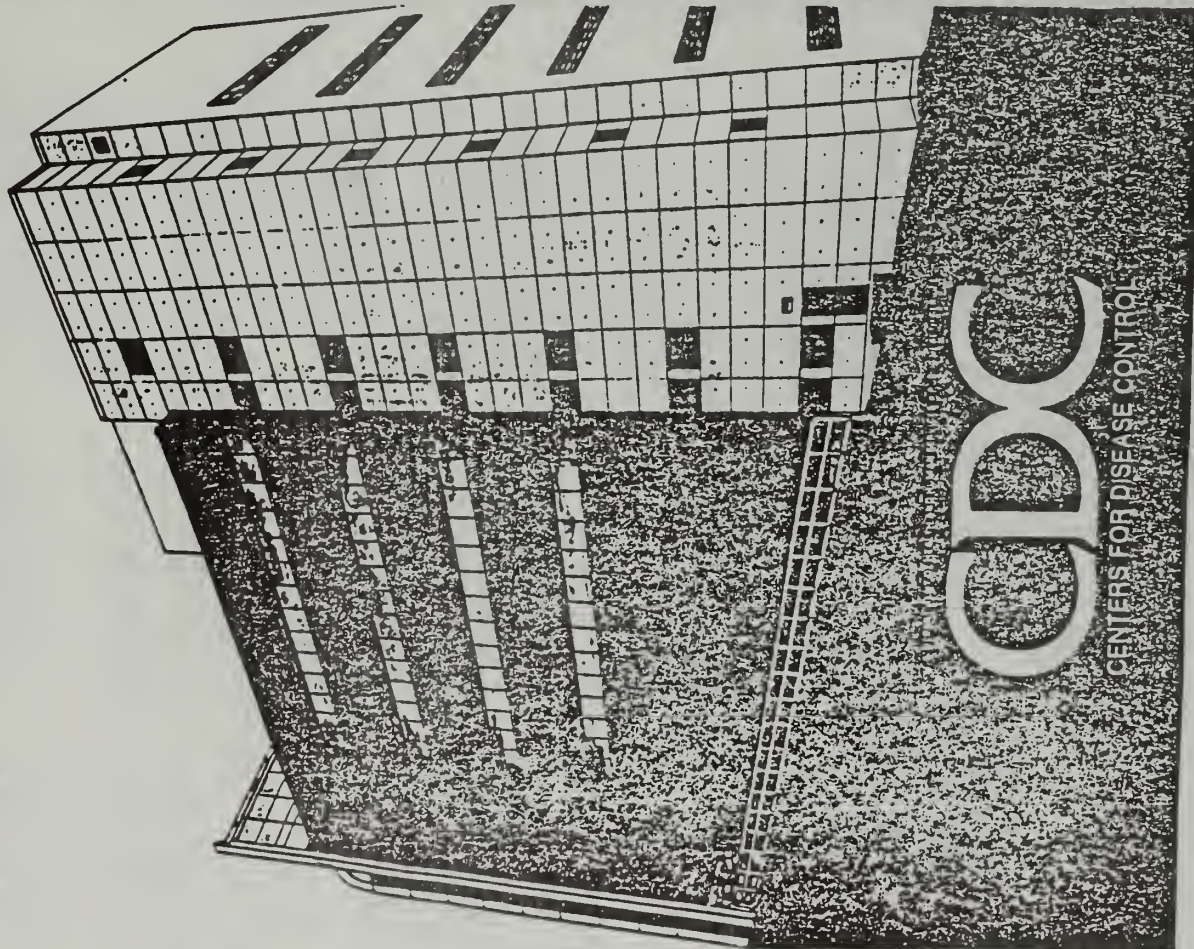
CDC's approach to identifying disease through careful surveillance was formalized with the founding of the Epidemic Intelligence Service in 1951. The EIS recruits physicians, veterinarians, nurses, statisticians and others in the social sciences and related fields. They receive an intensive course in epidemiology and then serve two year assignments at CDC or in a state or local health department. There they will develop

The Centers for Disease Control investigates dozens of outbreaks of illness throughout the United States each year. And often Epidemiology Program Office experts are called upon to investigate outbreaks elsewhere in the world.

CDC's disease detectives use the techniques of epidemiology to find the cause of an illness. The culprit could be bacteria, virus, toxic chemical, or rickettsiae. It could be an ancient enemy or something

surveillance systems. Investigate a disease outbreak, set up a cancer prevention program, or work in health education.

A part of most EIS officers' careers is being published in a refereed medical or science journal and the *Morbidity and Mortality Weekly Report*. CDC's often quoted weekly publication. The result of an 1878 Act of Congress requiring that states inform the Federal government of infectious diseases. *MMWR* is often the best way to communicate timely information to the nation's public health professionals.





## Providing Global Assistance in Preventing Disease

Because disease-bearing organisms do not respect international boundaries, preventing disease is not just a problem for the United States. It is a global problem.

The Centers for Disease Control's initial focus was on inspecting and quarantining incoming ships to prevent the introduction of disease.

In the late 1960s, CDC, working with the World Health Organization, led an international campaign that eradicated smallpox, an ancient enemy that had killed more people than all wars.

While CDC still answers international calls for help in fighting diseases, today its most important role is training health professionals of developing countries in the latest methods of disease prevention.

The International Health Program Office works with the Departments of Health in other nations and international organizations such as the World Health Organization and the Pan American Health Organization to train indigenous health workers and support programs to improve nutrition, sanitation, and immunization programs against childhood diseases. These programs are designed to improve the quality of life for millions of people throughout the world.

## Facts: the Starting Point for Prevention Policy

Modern public health practice is increasingly dependent upon statistical interpretation. Since the computer age began, having the necessary data makes it possible to see significant trends in public health that might otherwise be unnoticed. This statistical base is essential for evaluating and planning health policy and research priorities.

The National Center for Health Statistics collects and analyzes the full spectrum of the nation's vital and health statistics, conducts research into statistical and survey methodology, and provides technical assistance to health professionals in the United States and other nations.

These widely used data cover: the nature of illness and disability in the United States and its economic impact, environmental, social and

other health hazards, health resources including: the availability of hospital, nursing home, and ambulatory care, the nutritional status of the population; family formation, growth, and dissolution; and vital statistics—births, deaths, marriages, and divorces.

Center data are available to health professionals and the public in published reports and in digital form.

## Preventing Infectious Disease

From its beginning, the Centers for Disease Control has combined research and prevention strategies to control infectious diseases caused by bacteria, rickettsia, viruses and other organisms.

We are now moving against newly discovered infectious diseases such as AIDS, Toxic Shock Syndrome, Legionnaires' Disease—and old diseases which are resistant to drugs.

Using biotechnology, field investigation and surveillance, the Center for Infectious Diseases investigates outbreaks of infectious disease within the United States and internationally. It then develops programs to prevent their spread.

Effective prevention can include control programs (drying up mosquito breeding areas), public education (warning people of the dangers of Reye Syndrome and

assistance to control and prevent AIDS, diabetes, sexually-transmitted diseases, and tuberculosis), its immunization programs protect against childhood diseases including measles, mumps, polio, rubella, diphtheria, and pertussis and adult diseases including hepatitis, influenza, and tetanus.

The Center for Prevention Services provides financial and technical

Prevention programs also encourage dental health through increased participation in fluoridation of drinking water and prevention of periodontal disease. The Center also trains officers of the U.S. Immigration and Naturalization Service and the U.S. Customs Service to screen arriving foreign visitors for some diseases.

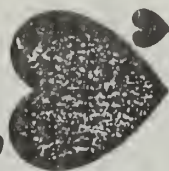
## Smoking: The Number One Preventable Cause of Death

Cigarette smoking is the nation's single most preventable cause of death. It causes cancers of the lung, mouth, larynx, esophagus, pancreas, kidneys, and bladder; chronic obstructive lung disease; heart disease and stroke. It kills about 1,000 Americans every day, equivalent to the number of lives lost if three jumbo jets crashed each day with no survivors.

The Office on Smoking and Health conducts behavioral and epidemiologic research, develops health promotion and education programs that encourage people to quit smoking, provides technical assistance and training to state and local health departments, and helps prepare the Surgeon General's annual report on the health consequences of smoking.



**PREGNANT?**



**THAT'S TWO GOOD REASONS TO QUIT SMOKING.**

## Promoting a Healthier Environment: Preventing Injuries, Disabilities

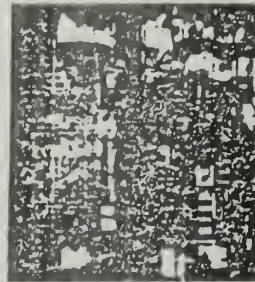
The Centers for Disease Control helps assure that the environment is a healthy place in which to live and work.

The Center for Environmental Health and Injury Control assists local public health officials at the scene of natural or manmade disasters—when a volcano erupts or a forest fire rages, hazardous chemicals leak or a nuclear accident occurs. It also reviews Environmental Impact Statements to assure that major Federal projects supported development projects are reasonably safe; it conducts research to prevent harm from toxic chemicals and natural and manmade radiation, and it protects the health of visitors to national parks.

The Center's laboratory and epidemiologic studies have provided valuable scientific knowledge of the effects of chemicals such as Agent Orange, dioxins, furans, lead, PCBs and PBBs, and various pesticides; emergencies such as the chemical plant that exploded at Bhopal, India, the eruption of Mount Saint Helens, the reactor accident at

Three kids inhaled carbon monoxide in Harrisburg, Pennsylvania, site of a major mishap in 1979—a bus radiator steam heated into the residential street. (The Williams Division, 1983 National Geographic Society)

Mount Saint Helens in Washington State was the site of a major volcanic eruption in 1981. (The State Division, 1981 National Geographic Society)



## Promoting Healthier Lifestyles

Encouraging people to change their lifestyles by reducing risk factors such as lack of exercise, obesity, and smoking, is critical to promoting healthier lives.

The Center for Health Promotion and Education develops effective health promotion programs to

promote reproductive and infant health, prevent cardiovascular diseases and hypertension; teach school children about the dangers of alcohol, cigarettes, drugs, stress, and AIDS; that support local programs that encourage exercise, proper nutrition, and the use of seatbelts.

## A Public Health Priority: Preventing Chronic Diseases

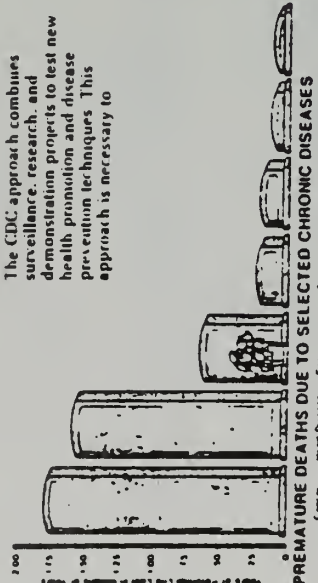
Preventing disease before people become ill is the Centers for Disease Control's goal.

CDC historically has played an important role in preventing the spread of the infectious diseases that plagued our nation and the world—influenza, smallpox, and yellow fever.

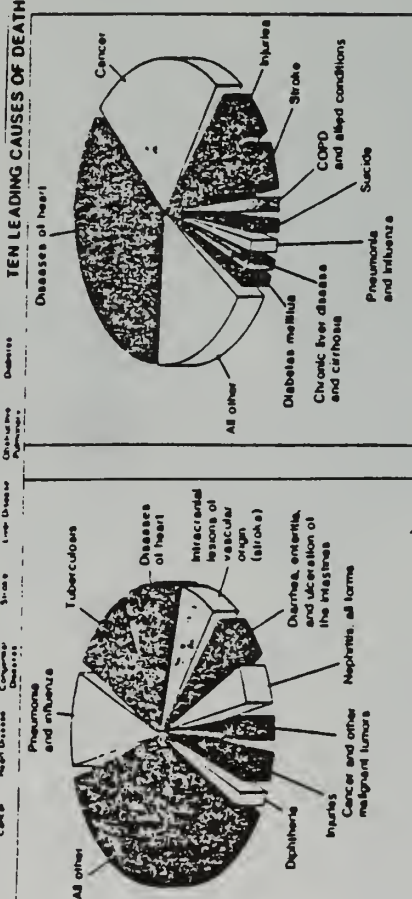
Today 70 percent of all deaths in the United States are due to cancer, cardiovascular disease, chronic obstructive lung disease, diabetes, kidney and liver disease—some of these traceable to infectious causes.

To meet the challenge of chronic disease, CDC's research and prevention programs are aimed at changing lifestyle and other factors that are major contributors to illness and death—the harmful use of alcohol and tobacco, lack of exercise, poor nutrition.

The CDC approach combines surveillance, research, and demonstration projects to test new health promotion and disease prevention techniques. This approach is necessary to



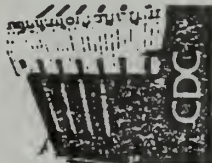
PREMATURE DEATHS DUE TO SELECTED CHRONIC DISEASES



## Deadline: CDC

**SPECIAL ISSUE**  
April, 1988  
CDC has undergone major changes in the last ten years. In early 1987, the agency was reorganized to better serve the public. This special edition of *Deadline* describes those changes.

*Deadline*, CDC's quarterly newsletter, is published by the Centers for Disease Control, Atlanta, Georgia 30333.



**COVER**  
Aerial view of the new CDC building, dedicated in July, 1988.

## Who We Are,

## Who We Need

The Centers for Disease Control is the agency of the U.S. Public Health Service responsible for preventing disease and promoting health.

Working with state and local health departments, other federal agencies, voluntary, professional, and international organizations, CDC both responds to the need for help during emergencies and develops programs to understand the causes of disease and injury and prevent their recurrence.

## Centers for Disease Control:

# Promoting Health Since 1946

**What is the Centers for Disease Control?** To many people it is a headline about AIDS, news stories about Legionnaires' Disease, or a photograph of public health workers inoculating African children against smallpox.

CDC is all of these things but much more, too.

It is scientists in laboratories developing a new diagnostic test and it is epidemiologists helping state health departments determine the cause of an outbreak of disease. It is health educators working on programs to promote healthier lifestyles and occupational health scientists evaluating standards to protect workers from on-the-job hazards.

CDC can be on the scene of a major health emergency—a volcanic eruption, forest fire, food poisoning, or nuclear accident—within hours. It also teaches public health workers in every local

communities in future generations. CDC grew out of the World War II Office of Malaria Control in War Areas in Atlanta. The program was started to protect American servicemen from the mosquito-borne diseases then indigenous to the southern states where their training camps were located. As the war ended, the Program was expanded to prevent tropical diseases such as dengue and yellow fever from entering the United States and taking root.

The late Assistant Surgeon General Dr. Joseph W. Mountin saw in the Office of Malaria Control the seed of a "Center of Excellence" for the prevention of communicable disease. Thus CDC began life in 1946 as the U.S. Public Health Service's Communicable Disease Center.

With a 1988 budget of \$771.8 million, CDC employs about 4,500 professionals in 170 different fields including administrators, behavioral scientists, computer specialists, chemists, environmental engineers, epidemiologists, laboratory technicians, microbiologists, pharmacologists, program and management analysts, research medical officers, statisticians, technical writers and editors, and toxicologists throughout the United States and the world.

About half the employees work at CDC's Atlanta, Ga. headquarters near Emory University. The remainder work at locations in Anchorage, Alaska; Fort Collins, Colo.; San Juan, Puerto Rico; at the National Center for Health Statistics headquarters in Hyattsville, Md.; and Research Triangle Park, N.C.; or at the National Institute for Occupational Safety and Health laboratories in Cincinnati, Ohio and Morgantown, W. Va.; in the metropolitan Washington, D.C. area, or at health departments throughout the United States and the world.







S e v e n t h

G r a d e



## SEVENTH GRADE

GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:  1. Understand the origin of the AIDS virus.  2. Review in detail the immune system and the effects of HIV on it.	1. Using information provided, the teacher will prepare appropriate units. (Teacher Information pp. 169-172)  NOTE: Review Grade 6 Teacher Information.	Suzanne LeVert, <u>AIDS: In Search of a Killer</u> , Julian Messner, New York, 1987.  Marcia Quackenbush and Pamela Sargent, <u>Teaching AIDS - A Resource Guide on Acquired Immune Deficiency Syndrome</u> , Network Publications, Santa Cruz, 1988.



# TEACHER INFORMATION

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**Background** The purpose of this lesson is to help students to recognize that a person may appear healthy outwardly, yet still be a carrier of the Human Immunodeficiency Virus (HIV) and be able to pass it on to others. Symptoms of many infections include night sweats, swollen glands, weight loss, etc. When AIDS or AIDS Related Complex (ARC) is involved, these symptoms are severe and persistent.

The current laboratory test for HIV reveals antibodies in the blood. The antibodies show up anywhere within the spectrum which is included in diagram form.

The activity of composing a letter allows students to express the wide range of concerns and confusions someone might experience. It also allows an opportunity to bring home to students just what AIDS has to do with them, and helps them to recognize that AIDS is not just a disease of "other people." It also can serve to dispel unnecessary fear, by providing accurate information.

**Teacher Vocabulary** **AIDS** – The initials for the disease "Acquired Immune Deficiency Syndrome." A disease caused by a virus which breaks down the body's immune system, making it vulnerable to opportunistic infections and cancer.

**Antibodies** – Substances in the blood produced by the body's immune system to fight against invading organisms.

**Antigen** – A substance that stimulates the production of antibodies.

**ARC** – AIDS Related Complex. A condition caused by the HIV in which the individual tests positive for HIV and has a specific set of clinical symptoms that are often less severe than those of AIDS.

**Asymptomatic** – No apparent symptoms of illness even though the individual tests positive for the HIV.

**Carrier** – A person who harbors a specific infectious agent in the absence of clinical disease and serves as a potential source of infection.

**HIV** – The Human Immunodeficiency Virus. It causes AIDS by attacking the body's immune system, making infected people vulnerable to fatal infections, cancer, and neurological disorders.

**Immune system** – A body system that helps fight off invading organisms and disease.

**Incubation period** – The time interval between invasion by an infectious agent and appearance of the first sign or symptom of the disease in question.

**Kaposi's sarcoma** – A cancer or tumor of the blood and/or lymphatic vessel walls. It usually appears as blue-violet to brownish skin blotches or bumps.

**Opportunistic infection** – An infection caused by a microorganism that rarely causes disease in persons with a normal immune system.

**Pneumocystis carinii pneumonia** – The most common life-threatening opportunistic infection diagnosed in AIDS patients. It is caused by a parasite, *Pneumocystis carinii*.

**Spectrum** – A range of factors associated with HIV infection or a range of outcomes.

***Syllabus Connection***

**VI Diseases and Disorders** – understanding diseases and disorders and taking actions to prevent or to limit their development. (pp. 28-29)

***Values Integration***

**Reasoning/understanding the spectrum of infection of the AIDS virus**

# SPECTRUM OF HIV INFECTION

	ASYMPTOMATIC	ARC AIDS RELATED COMPLEX	AIDS
<b>External Signs</b>	<ul style="list-style-type: none"> <li>• No symptoms</li> <li>• Looks well</li> </ul>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Night sweats</li> <li>• Swollen lymph glands</li> <li>• Weight loss</li> <li>• Diarrhea</li> <li>• Minor infections</li> <li>• Fatigue</li> </ul>	<ul style="list-style-type: none"> <li>• Kaposi's sarcoma</li> <li>• Pneumocystis carinii pneumonia and other opportunistic infections</li> <li>• Neurological disorders</li> </ul>
<b>Incubation</b>	<ul style="list-style-type: none"> <li>• Invasion of virus to 3 months</li> </ul>	<ul style="list-style-type: none"> <li>• Several months to 10 years</li> </ul>	<ul style="list-style-type: none"> <li>• Several months to 10 years</li> </ul>
<b>Internal Level of Infection</b>	<ul style="list-style-type: none"> <li>• Antibodies are produced</li> <li>• Immune system remains intact</li> <li>• Positive antibody test</li> </ul>	<ul style="list-style-type: none"> <li>• Antibodies are produced</li> <li>• Immune system weakened</li> <li>• Positive antibody test</li> </ul>	<ul style="list-style-type: none"> <li>• Immune system deficient</li> <li>• Positive antibody test</li> </ul>
<b>Possible to Transmit HIV</b>	<ul style="list-style-type: none"> <li>• Yes</li> </ul>	<ul style="list-style-type: none"> <li>• Yes</li> </ul>	<ul style="list-style-type: none"> <li>• Yes</li> </ul>



**Objective**      AIDS is a communicable disease.

**Learner Outcome**      Know that a person can transmit the AIDS virus even if he/she looks healthy.

**Comprehensive Health Education Topic(s)**      VI Diseases and Disorders

**Values Integration**      Reasoning: Understanding the spectrum of infection of the AIDS virus.

---

**Motivating Activity**      The teacher will distribute this "Dear Sam" letter to each student:

Dear Sam:

What is the AIDS virus? What does it mean when someone has the AIDS virus...? All the TV and news stories are confusing me.

CONCERNED

**Identification**      The teacher will draw the AIDS virus (HIV) spectrum on the board with three stages:

- asymptomatic
- ARC
- AIDS

Students will identify internal and external signs of the disease for each of the three stages.

**Effective Communication**      Students will compose a response to CONCERNED's letter.

**Decision Making**      Students will decide how CONCERNED should be answered.

---

**Positive Health Behaviors**      Students will know that a person can transmit the AIDS virus whether he/she looks healthy or ill.

## SEVENTH GRADE

**GOAL 11:** Identify the methods of preventing, treating, and controlling diseases.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:		
1. Explain the routes of transmission of HIV.	1. Using information provided, the teacher will prepare appropriate units.	Video <u>AIDS: Everything You and Your Family Need to Know...But Were Afraid to Ask</u> , HBO Studio Productions, Ambrose Video Publishing, Inc., New York, 1987.
2. Discuss those behaviors which put individuals at high risk for getting AIDS.	NOTE: Review Grade 6 Teacher Information.	
	2. Students will complete an AIDS myth/fact sheet. (Teacher Information pp. 174-177)	Pamphlet "Guidelines for Effective School Health Education to Prevent the Spread of AIDS," <u>Morbidity and Mortality Weekly Report</u> , Vol. 37, No. S-2, Centers for Disease Control, Atlanta, January 29, 1988.
	3. Students will complete "AIDS: Rank the Risk" activity sheet. (Worksheet 7-A)	



# TEACHER INFORMATION

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## **Background**

For this activity we have used the term "the AIDS virus" to help the students relate to what they read and hear about AIDS. The more accurate designation is that Human Immunodeficiency Virus (HIV) is the transmitter of the disease AIDS.

A true-false quiz is used to clarify information students have or should have. This quiz is repeated in increasingly complex form through grades 4-12. It is important for you to review regularly accurate, up-to-date information stressing especially the ways AIDS is and is not transmitted. Correcting misinformation can reduce the fears that could get in the way of practicing skills that will protect oneself, and others, from AIDS.

Adapt the "AIDS MYTH-FACT SHEET" to suit the needs of your students and distribute to each student. Have students respond to each statement and correct their own mistakes. The lesson allows for correction of misinformation during a discussion of student responses. An answer sheet is included for your convenience.

While good health practices do not include sharing makeup and towels, the information is included to stress ways AIDS is *not* transmitted. This is also an opportunity to reinforce that sitting next to a student with AIDS does not put one at risk because the AIDS virus is not transmitted by casual contact.

## **Special Considerations**

Information on sexual intercourse may be introduced in this lesson. Because the knowledge level about human reproduction varies according to local curriculum and the knowledge of individual students, the lesson should be adjusted to insure that the information presented and the student's preparation for the lesson match. Adjustments in the lesson or prerequisite lessons may be necessary.

## **Syllabus Connection**

**VI Diseases and Disorders** – understanding diseases and disorders and taking actions to prevent or to limit their development. (pp. 28-29)

## **Values Integration**

**Respect for self/awareness** and concern for one's own health  
**Reasoning/understanding** the process of AIDS transmission

<b>Objective</b>	AIDS is a communicable disease.
<b>Learner Outcome</b>	Know ways the AIDS virus can and cannot be transmitted.
<b>Comprehensive Health Education Topic(s)</b>	VI Diseases and Disorders
<b>Values Integration</b>	Reasoning: Understanding the process of AIDS transmission. Respect for Self: Awareness and concern for one's own health.

---

**Motivating Activity** The teacher will distribute the AIDS MYTH-FACT SHEET.

**Identification** Students will identify the ways that the AIDS virus can be transmitted:

- sharing needles (IV drug use)
- sexual intercourse with an infected partner
- infected mother to unborn baby
- transfusion of infectious blood or blood fractions

Students will identify ways that the AIDS virus cannot be transmitted:

- sneezing
- sharing makeup, towels
- using public toilets
- using swimming pools
- eating at a restaurant
- being in the same class with someone who has AIDS

**Effective Communication** Students will discuss ways the AIDS virus can and cannot be transmitted.

**Decision Making** Using the AIDS MYTH-FACT SHEET, students will decide under which circumstances the AIDS virus can be transmitted.

---

**Positive Health Behaviors** Students will understand the ways the AIDS virus can be transmitted.

Students will recognize the ways that the AIDS virus cannot be transmitted.



## AIDS MYTH-FACT SHEET FOR LESSON #20 (grades 7-8)

Put a T in front of each statement that is true and an F in front of each statement that is false.

1. The AIDS virus is *only* transmitted through infected semen and infected blood.
2. The AIDS virus is transmitted by hugging and kissing.
3. AIDS is a disease that can be transmitted in a limited number of ways.
4. People can look and feel healthy and still transmit the AIDS virus.
5. People who shoot drugs and share needles can get AIDS.
6. There is a vaccine to prevent AIDS.
7. Women can transmit the AIDS virus.
8. Everyone who engages in sexual intercourse is at risk for AIDS if an infected partner is involved.
9. Everyone infected with the AIDS virus has developed AIDS.
10. A person can get AIDS from giving blood.
11. There are national and State toll-free, telephone hotlines that provide AIDS information.

## **Answers to AIDS MYTH-FACT SHEET #20**

1. False
2. False
3. True
4. True
5. True
6. False
7. True
8. True
9. False
10. False
11. True

The U.S. Public Health Service 24-hour AIDS national hotline phone number is: 1-800-342-AIDS. The South Dakota State Hotline is 1-800-592-1861.



NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

**ACTIVITY: AIDS: Rank the Risk**

**DIRECTIONS:** Rate the following in terms of risk for transmission of the AIDS virus. In which of these following activities or behaviors is there a greater degree risk.

- KEY:**
- 1 - No Risk; Safe
  - 2 - Theoretically Possible but Not Probable
  - 3 - Minimal Risk; Protection Measures Could Be Taken
  - 4 - Risk; Risk Reduction Measures Could Be Taken
  - 5 - High Risk

- \_\_\_\_\_ Going to school with a person who has AIDS
- \_\_\_\_\_ Providing emergency care to someone injured in a car accident
- \_\_\_\_\_ Living in the same home as a person with AIDS virus infection
- \_\_\_\_\_ Having more than one sexual partner at one time
- \_\_\_\_\_ Getting injured in some activity at the same time as someone else and coming into contact with their blood
- \_\_\_\_\_ Being born to a mother who has the AIDS virus
- \_\_\_\_\_ Using a needle for IV drugs that someone else has used
- \_\_\_\_\_ Using condoms and spermicides during sexual intercourse every other time
- \_\_\_\_\_ Being sneezed on by someone who has the AIDS virus
- \_\_\_\_\_ Piercing your ears
- \_\_\_\_\_ Sharing a needle and syringe for injecting anything
- \_\_\_\_\_ Having received blood or blood products before March 1985
- \_\_\_\_\_ Providing first aid - direct pressure to a bleeding wound
- \_\_\_\_\_ Providing CPR to someone known to have the AIDS virus
- \_\_\_\_\_ Having one sexual partner at a time
- \_\_\_\_\_ Abstaining from sex
- \_\_\_\_\_ Deciding not to have sex, then drinking at a party and being pressured to have sex by your girlfriend/boyfriend
- \_\_\_\_\_ Providing dental care to someone with AIDS virus infection

**NOTE TO EDUCATOR:**

**Purpose:** Elicit discussions about risk behaviors.

**Learner Outcomes:** 14,15,16,18,23,24,30,35,36

**Directions:** Relative risk depends on risk behavior and risk group. In is a process activity students can discuss all the variables and clarify myths and facts about transmission. Have students list other risk behaviors.



## SEVENTH GRADE

GOAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:  1. Examine the consequences that acquiring AIDS has on an individual, family, and community.	1. Using the factual information students have gained and the information provided, the teacher will lead a class discussion on the social implications of AIDS. (Teacher Information pp. 180-187)	<u>Scientific American</u> , Vol. 259, No. 4, October 1988.  <u>Scholastic Update</u> , Vol. 120, No. 4, October 16, 1987.



# TEACHER INFORMATION

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## AIDS: THE PREVENTABLE EPIDEMIC GRADES 6-8

### OBJECTIVE:

The student will demonstrate the ability to analyze the social implications of the AIDS epidemic to further integrate unit information.

### MATERIALS:

Policy Guidelines, Pages

### VOCABULARY:

Confidentiality, discrimination, policy, other vocabulary based on policies introduced

### PROCEDURES:

1. Ask students to quiz each other on infection control procedures either verbally or through demonstration.
2. Explain that the purpose of the final lesson is to continue to explore the fear that others have about AIDS and how it affects not only first aid situations but the rights of individuals with AIDS.
3. List some of the social issues in AIDS. Based on this information, put students in small groups to discuss the following questions:

What are some of the feelings people have about AIDS and persons with AIDS.

How does AIDS change the life of a person infected?

How can the AIDS epidemic change our lives?

4. After sharing ideas as a class on the above questions, tell the small groups to discuss their feelings about a student with AIDS attending class with them. What special, if any, measures should be taken for a student diagnosed with AIDS. List the group ideas.
5. Tell students that school districts are writing policies to protect all students from the spread of HIV as well as protect the rights of those infected with HIV.
6. Provide examples of policies for students to review in small groups. As a class, ask students to identify key points found in a policy such as confidentiality, factual information and infection control procedures.
7. Assign students the task of developing a model policy for their school. This can be done individually or in small groups.
8. Allow time for policy development in class and sharing of policies.

### EVALUATION:

Grading-could be based on the criteria presented in the policy assignment.

**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 6-8**

**SOCIAL ISSUES**

Below are some of the social issues in AIDS that can be useful for class discussion.

Persons with HIV infection, ARC and AIDS are confronted with a variety of issues:

1. Dealing with the diagnosis and the possibility of death.
2. Telling loved ones of the diagnosis, facing possible rejection.
3. Facing high health care costs.
4. Finding doctors, dentists and other health care workers to care for them.
5. Being fired from their jobs. Not being able to get jobs because of illness.
6. Eviction from homes they rent.
7. Facing protests from the community or parents not wanting the person to attend school.
8. Handling the misinformation and prejudice of others.

Below are examples of how we should respond to persons with AIDS.

Persons with HIV infection, ARC and AIDS should receive:

1. Understanding and compassion.
2. Access to competent medical care and treatment.
3. Right to work based on reasonable accommodations if needed.
4. Right to attend school.
5. An important role in society and not be viewed as or called "victims."
6. A care system that provides medical and emotional support.
7. All the opportunities of any other person.
8. Confidentiality.
9. The right to live where they choose.
10. A discrimination - free environment.



## **Montana Department of Health and Environmental Sciences Recommendations for Preventing the Transmission of Human Immune Deficiency Virus in the School Setting**

### **Background**

As of February 16, 1987, 444 children in the U.S. under the age of 13 have been diagnosed with AIDS/HIV. Most of these children became ill very early in life (at less than one year of age), having contracted the infection either congenitally or from blood transfusions. No family members of these children have become ill from contact with the children. However, until we know more about AIDS/HIV, day care workers, school teachers, and others should exercise the same precautions they would take with an adult with AIDS/HIV.

The recommendations which follow apply to all children known to be infected with human immunodeficiency virus (HIV). This includes children with AIDS/HIV; children who are diagnosed by their physicians as having an illness due to infection with HIV but who do not meet the case definition; and children who are asymptomatic but have virologic or serologic evidence of infection with HIV.

The CDC case definition of AIDS/HIV in children is available from the Montana Department of Health and Environmental Sciences.

### **School Attendance Guidelines**

The question of children with AIDS/HIV attending day care or school is not strictly a medical matter. The following recommendations and infection control procedures are intended to provide the initial framework for development of subsequent guidelines by all parties concerned. Each child infected with HIV should be considered individually.

1. A child with AIDS/HIV should be allowed to attend day care and school in a regular classroom setting with the approval of the student's physician.
2. Day care centers and schools should attempt to use the least restrictive means to accommodate the child's needs and the infection control recommendations.
3. Infected children should be allowed to attend day care or school as long as they are toilet trained, have no uncoverable open sores or skin eruptions, and do not bite. Students (K-12) who are excluded for these reasons should receive adequate alternative education through homebound or other programs.
4. Children with AIDS/HIV should be temporarily removed from day care or school if measles or chickenpox is occurring in the school population (e.g., cases occurring in classroom or close non-classroom contacts). This also applies to other children with immune system abnormalities.
5. Children with AIDS/HIV should be temporarily removed from day care or school when they are acutely ill, as should any child.
6. The day care center or school should respect the right of privacy of the individual; therefore, knowledge that a child has AIDS/HIV should be confined to those selected persons with a direct need to know (e.g., principal, school nurse, child's teacher or day care director). Those persons should be provided with appropriate information concerning such precautions as may be necessary and should be aware of confidentiality requirements.
7. The school nurse or other knowledgeable person should be appointed as the child's advocate to assist in problems that arise, provide educational materials, answer questions and act as liaison with the child's physician.





## **General Precautions**

1. Good personal hygiene is probably the best protection against infection, with careful handwashing being the single most important personal hygiene practice. Handwashing, combined with a common-sense avoidance, removal or reduction of possible sources of infection is important in all communicable disease control, including HIV/AIDS. Handwashing applies even if gloves are worn.
2. Disposable gloves should be used any time there will be contact with blood, urine, feces, semen or saliva. Hands should be thoroughly washed after gloves are discarded.
3. Thorough cleaning of surfaces contaminated with blood or other body fluids followed by use of disinfectants must be maintained.

Environmental surfaces are generally adequately cleaned by housekeeping procedures commonly used. Surfaces exposed to blood and body fluids should be cleaned with a detergent followed by decontamination using an EPA-approved hospital disinfectant that is mycobactericidal. Individuals cleaning up such spills should wear disposable gloves.

Laundry and dishwashing cycles commonly used in public facilities are adequate to decontaminate linens, dishes, glassware and utensils.

Leak-proof bags should be used for disposal of cleaning materials.

Chemical germicides registered with and approved by the U.S. Environmental Protection Agency (EPA) should be used. Information on specific label claims of commercial germicides can be obtained by writing: Disinfectants Branch, Office of Pesticides, Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. The manufacturer's instructions should be followed, and the instrument or device to be sterilized or disinfected should be cleaned thoroughly before exposure to the germicide.

## **Personal Contact**

1. Direct mouth-to-mouth or genital contact should be avoided with persons with AIDS/HIV. Activities such as mouth-to-mouth kissing should be discouraged.
2. Mouth-to-mouth sharing of food and other objects (e.g., pencils, gum, toys) between children should be discouraged.
3. Personal toiletry items (e.g., towels, toothbrushes, razors) and tools (e.g., scissors, nail files, woodworking tools) which may potentially cause cutting injuries should not be shared by persons with AIDS/HIV and others. Toothbrushes should not be available in day care or preschool situations.

## **Contact with Blood or Other Body Fluids**

1. Care should be taken to minimize breaks in the skin (for example, hand lotion can be used to minimize chapping). If the person with AIDS/HIV has breaks in the skin, the care provider should use gloves when touching those areas.
2. Bleeding or oozing cuts or abrasions (in either the care giver or a person with AIDS/HIV) should be covered (gauze, bandaids, etc.) whenever possible. The care provider's fingernails should be kept trimmed and clean.



3. Care providers should avoid direct contact with blood while caring for nose bleeds, bleeding or oozing wounds, or menstrual accidents in a person with AIDS/HIV. Disposable gloves should be used in these situations.
4. Gloves, sanitary napkins, gauze pads or any other materials which are soiled should be carefully and promptly discarded in leakproof, sealed plastic bags or containers. Ultimate disposal is by incineration or placement in a properly supervised and maintained sanitary landfill.
5. Environmental surfaces soiled with blood should be thoroughly cleaned as recommended previously.

#### **Soiled Items**

1. Items soiled by blood, saliva or other body fluids from a person with AIDS/HIV should not be used by others; these items should be discarded or thoroughly cleaned with soap and water and disinfected with an appropriate disinfectant before reuse.
2. Dishes—Washing of dishes with plenty of hot, soapy water, followed by thorough rinsing, is recommended. An electric dishwasher can also be utilized for dishwashing. Separate dishwashing is not needed for dishes or utensils used by someone with AIDS/HIV.
3. Laundry—Blood-contaminated items should be handled with appropriate precautions (gloves, aprons and any other cover-up needed to prevent direct exposure to blood). Washing with soap, hot water and bleach, followed by thorough rinsing is suggested. A washing machine and dryer can be utilized. Separate laundering is not necessary for items used by a child with AIDS/HIV. It is of importance to thoroughly scrape and clean adherent materials from objects and surfaces before laundering.

#### **Employees With AIDS/HIV**

The determination of whether an infected school employee should be permitted to remain employed in a capacity that involves contact with students or other school employees should be made on a case-by-case basis. In making this determination, consideration should be given to: (1) the physical condition of the school employee; (2) the expected type of interaction with others in the school setting; (3) the impact on both the infected school employee and others in that setting.

The sexual orientation of a school employee is not cause to believe that he or she is an infected individual. No school employee or potential school employee should be required to provide information as to his/her sexual orientation.

School districts who have employees with reactive HIV tests are urged to solicit advice from their legal counsel and the State AIDS Project Coordinator (444-4740).

#### **Other Issues in the Workplace**

The information and recommendations contained in this document do not address all the potential issues that may have to be considered with making specific employment decisions for persons with HIV infection. The diagnosis of HIV infection may evoke unwarranted fear and suspicion in some co-workers. Other issues that may be considered include the need for confidentiality, applicable federal, state, or local laws governing occupational safety and health, civil rights of employees, workers' compensation laws, provisions of collective bargaining agreements, confidentiality of medical records, informed consent, employee and patient privacy rights, and employee right-to-know statutes.



## References

CDC, "Education and Foster Care of Children Infected with HIV," MMWR, Volume 34, No. 34, August 30, 1985.

CDC, "Recommendations for Preventing Transmission of Infection with HIV in the Workplace," MMWR, Volume 34, No. 45, November 15, 1985.

"Guidelines for Children with AIDS/ARC Attending School," Indiana State Board of Health, July 1985.

"Minnesota Department of Health Guidelines for the Placement in Schools of Children and Adolescents Infected with HIV," September, 1985.

NEA, "Recommended Guidelines for Dealing with AIDS in the Schools," *NEA Now*, National Education Association, Washington, DC, October 14, 1985.





## SEVENTH GRADE

**GOAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Review local resources available for AIDS information.
1. Information presented will be based on local resources available.



**E i g h t h**

**G r a d e**



## EIGHTH GRADE

**GOAL 1:** Recognize the causes and characteristics of communicable and noncommunicable diseases.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:		
1. Compare communicable and noncommunicable diseases.	1. Using information provided, teachers will prepare appropriate units. (Teacher Information pp. 191-197)	
2. Analyze the chain of infection as it relates to common communicable diseases, including AIDS.		



# SAMPLE LESSON PLAN: Junior High / Senior High School

**Sample Learner Outcome:** The risk of becoming infected is increased by having a sexual partner who is at increased risk of having contracted the AIDS virus (as identified previously), practicing sexual behavior that results in exchange of body fluids (i.e., semen, vaginal secretions, blood), and using unsterile needles or paraphernalia to inject drugs.

**Sample Specific Objective:** Student will understand the "chain of infection" for the AIDS virus and how to break it.

## Acquiring Information

- With the class, the teacher will present the concept of "chain of infection" (Diagram B).
- With the class, the teacher will discuss how the varicella virus can be transmitted from one person to another. Teacher will build a "chain of infection" for the varicella virus (chicken pox), discussing each point (Diagram C.).
- With the class, the teacher will build a "chain of infection" for HIV, discussing each point (Diagram D.).
- Using the "chain of infection" for varicella virus (chicken pox), the teacher will discuss how to break the "chain of infection" for chicken pox (Diagram E.).
- Using the "chain of infection" for HIV, the teacher will discuss how to break the "chain of infection" for AIDS (Diagram F.).

## Integrating Information

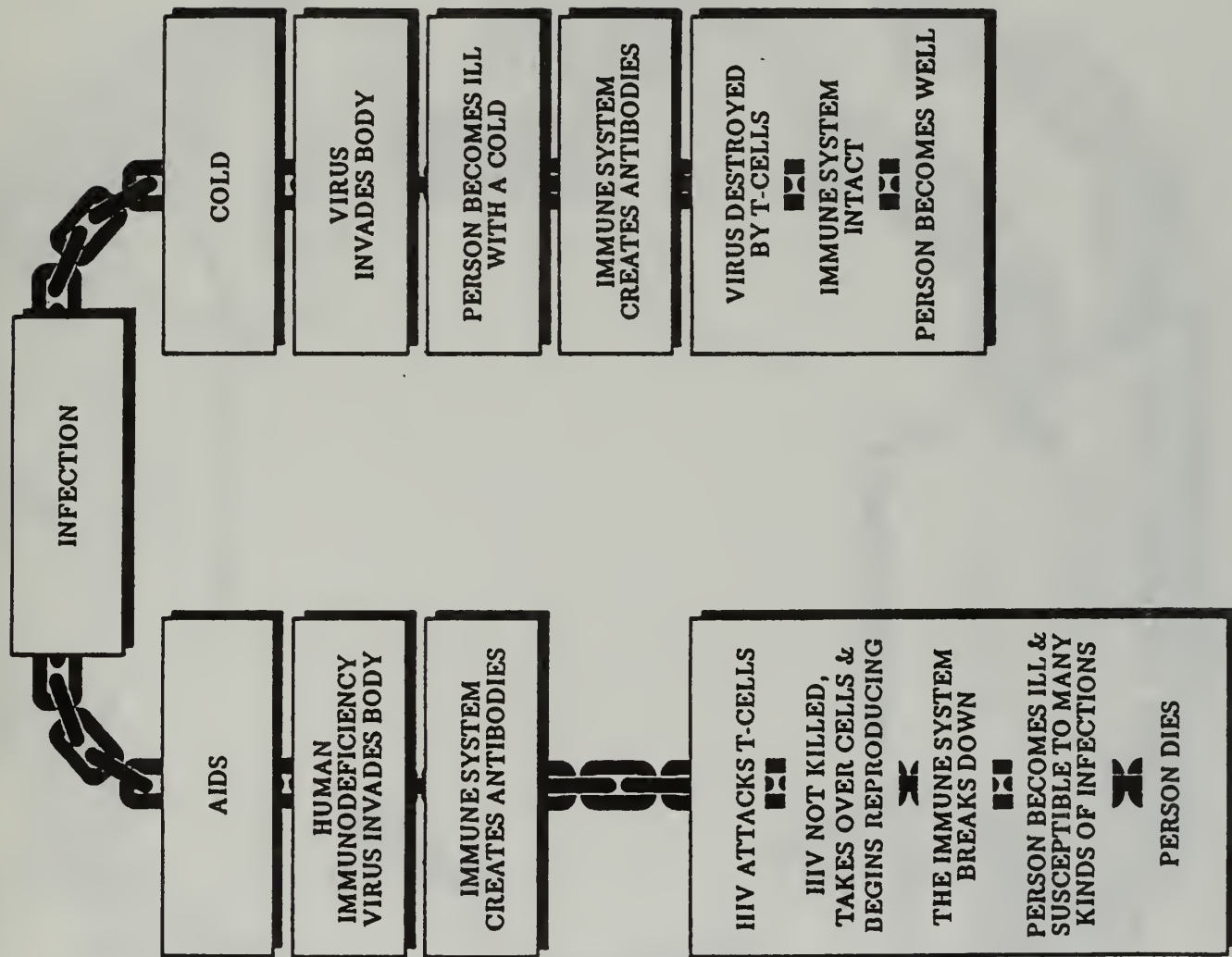
- Students will differentiate between transmission of varicella virus and HIV.
- Students will identify the ways that HIV can be transmitted:
  - Sexual intercourse with infected partners
  - Sharing needles and other paraphernalia with infected partners
  - Infected mother to baby
  - Transfusion of infected blood or blood products.
- Students will identify the ways that HIV *cannot* be transmitted:
  - Casual contact – touching someone with AIDS, taking care of someone with AIDS, swimming pools, sneezing, coughing, toilets, mosquitoes, etc.
- Students will identify the ways to break the "chain of infection" for the varicella virus (chicken pox):
  - Hand washing
  - Isolating infected person
  - Avoiding contaminated clothing
  - Avoiding contact with skin
  - Immunization (now being tested).
- Students will identify the ways to break the "chain of infection" for AIDS:
  - Abstaining from sexual intercourse
  - Abstaining from illegal drug use
  - Not exchanging infected blood, infected blood products, or body fluids (semen, vaginal secretions) with another person.
  - Using a latex condom with spermicides when engaging in sexual intercourse.





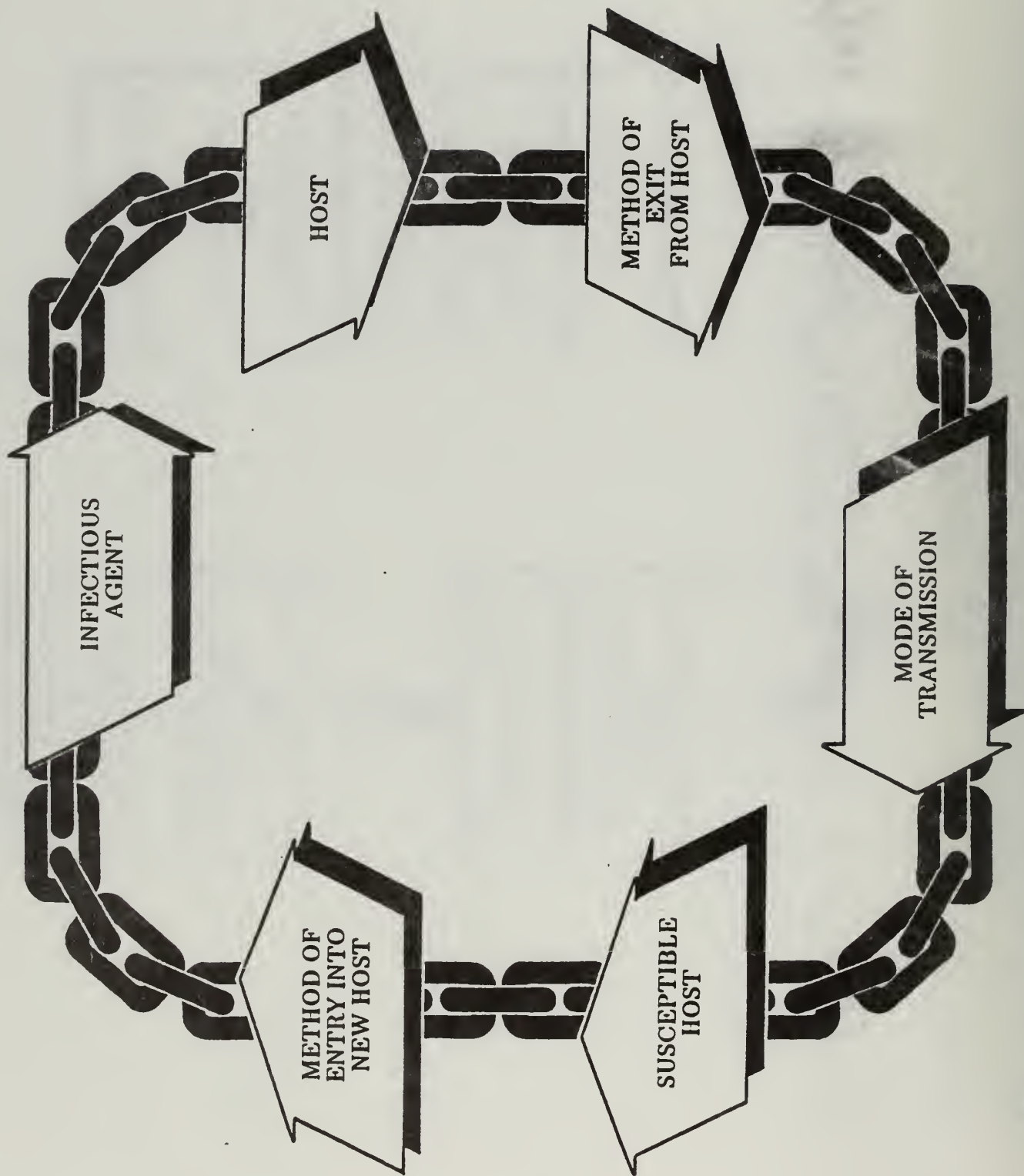
Diagram A

# THE IMMUNE SYSTEM



# CHAIN OF INFECTION

Diagram B



# CHAIN OF INFECTION

FOR VARICELLA VIRUS  
(Chicken Pox)

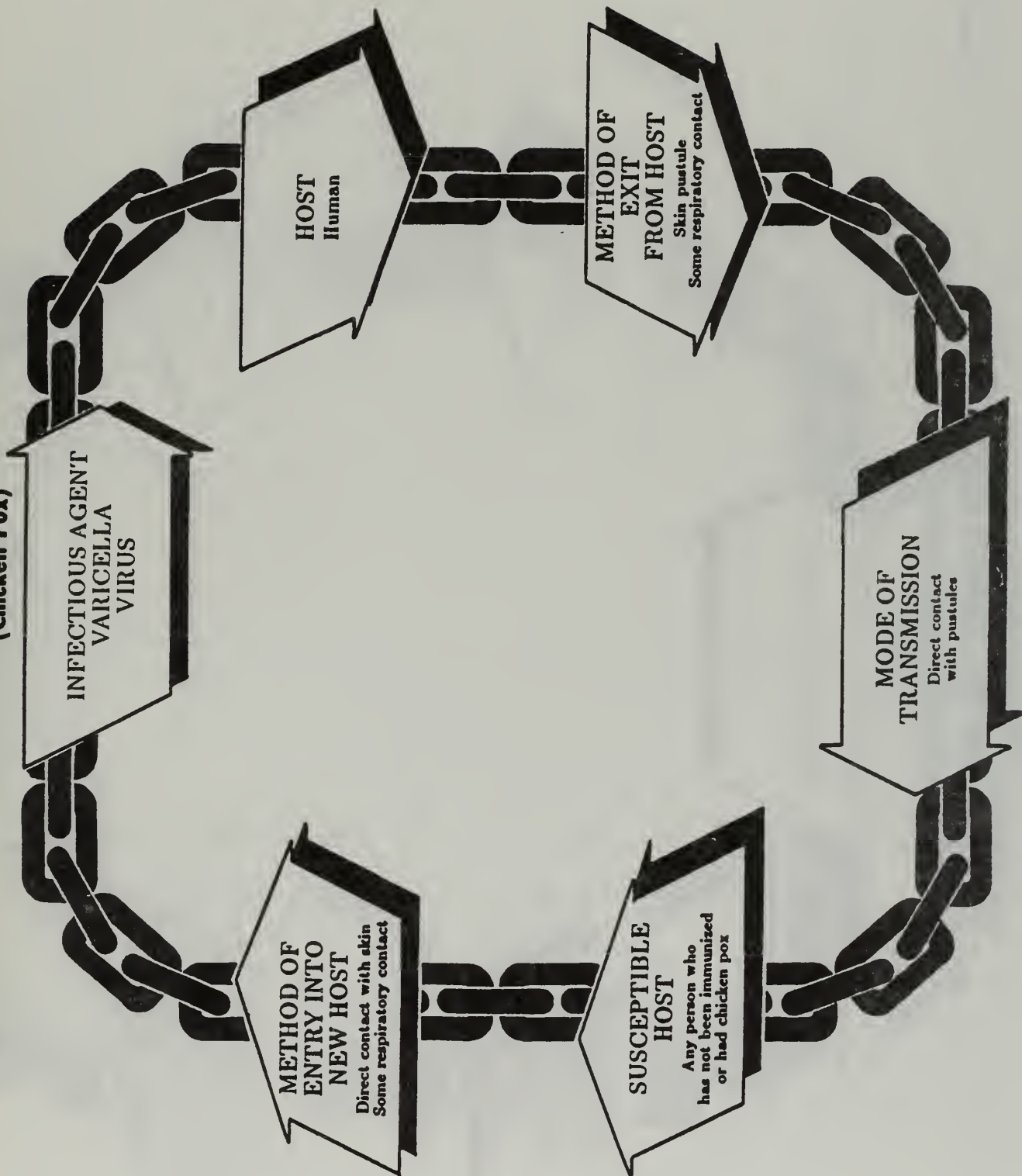


Diagram C

# CHAIN OF INFECTION

## FOR HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Diagram D

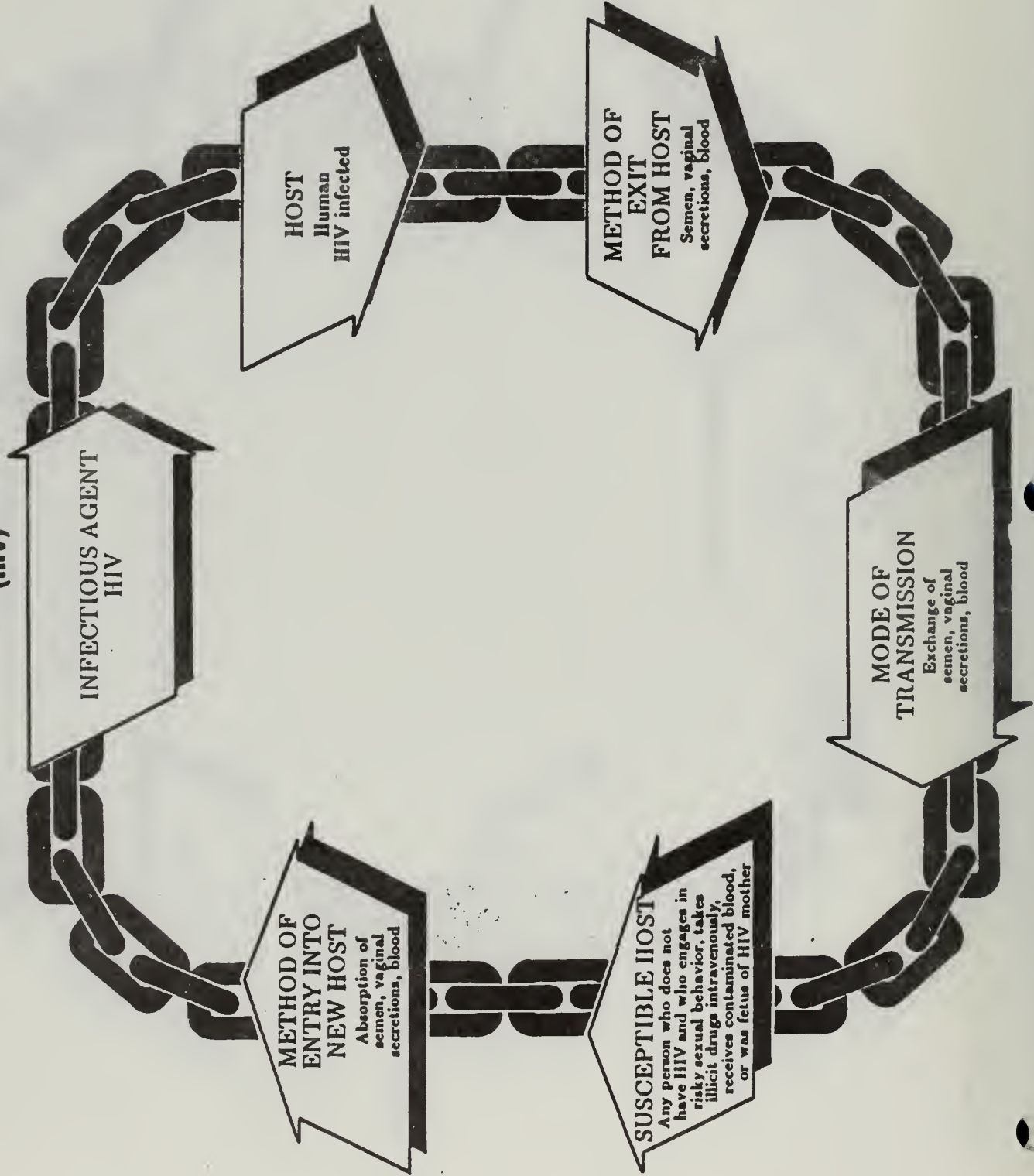
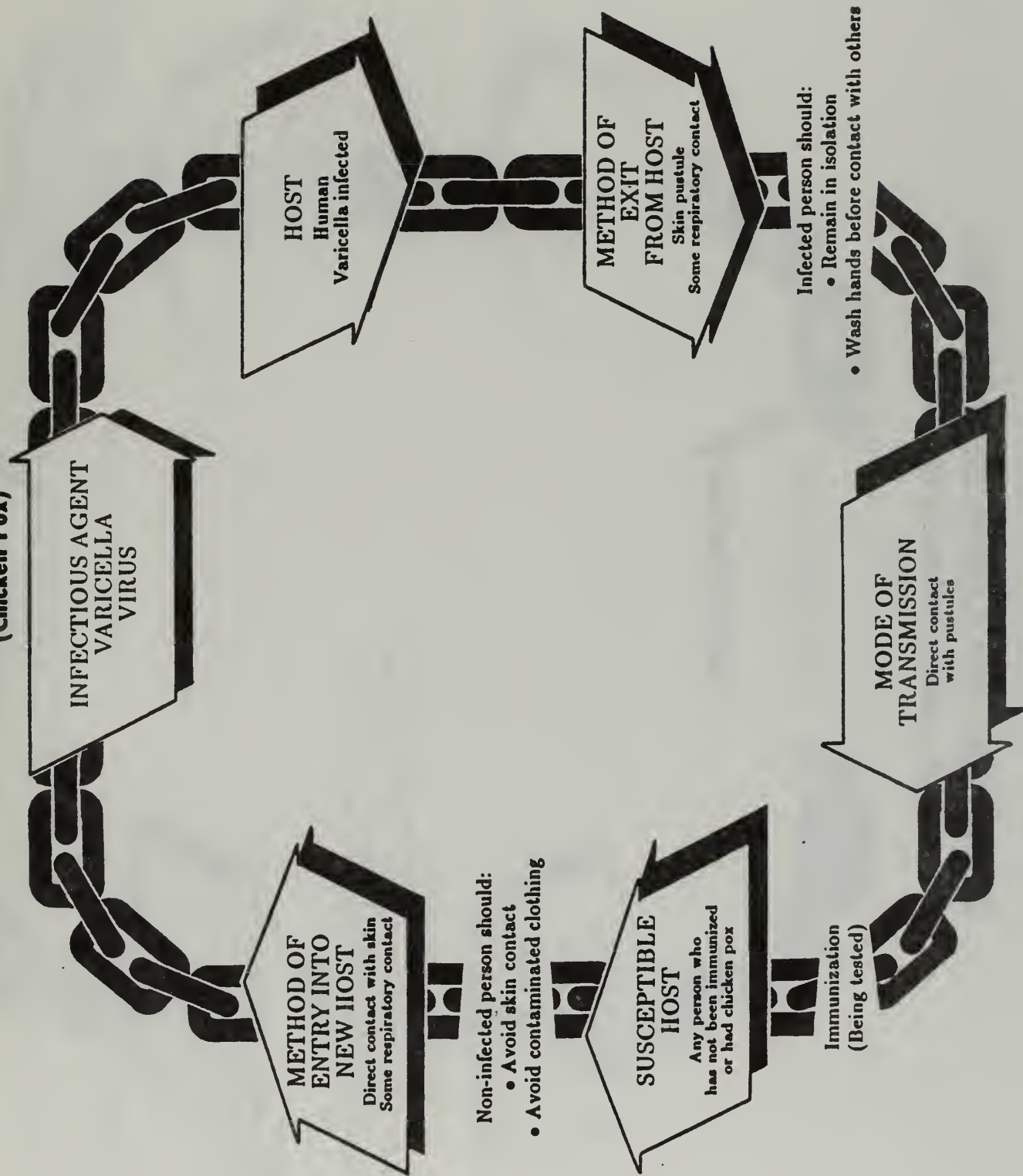




Diagram E

# BREAKING THE CHAIN OF INFECTION

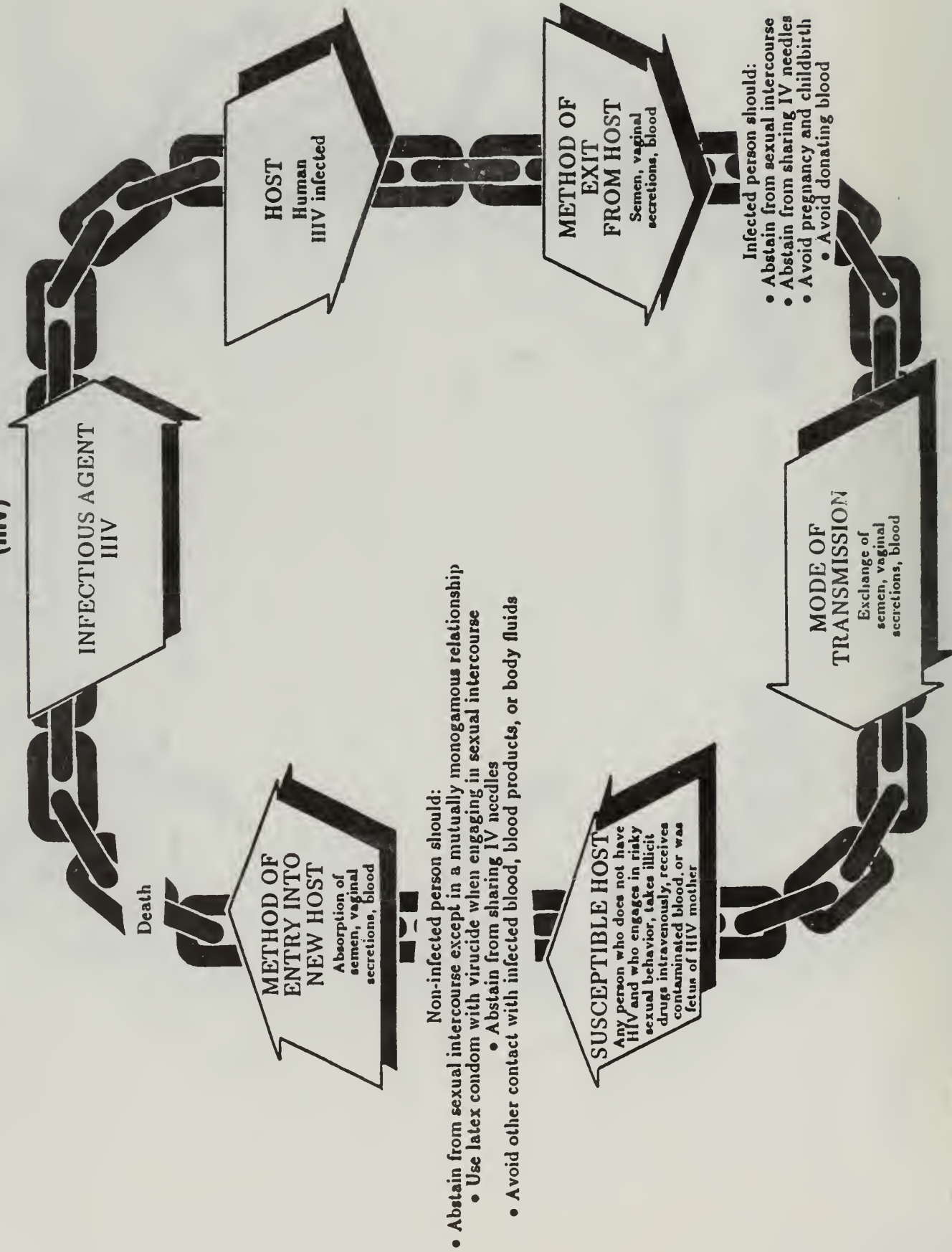
## FOR VARICELLA VIRUS (Chicken Pox)



# BREAKING THE CHAIN OF INFECTION

## FOR HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Diagram F





## EIGHTH GRADE

**GOAL II:** Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Review sample lesson plan.

1. Analyze risk behaviors and relate them to the chain of infection.

2. Predict ways the AIDS chain of infection can be broken.



## EIGHTH GRADE

COAL III: Evaluate the effects of disease on individuals, families, communities, and societies.

STUDENT OUTCOMES	POSSIBLE ACTIVITIES	TEACHER NOTES AND RESOURCES
Students will:		
1. Analyze public reaction to persons with AIDS and identify reasonable and unreasonable reactions.	1. Using sample lecture, teacher will prepare an appropriate lesson. (Teacher Information pp. 200-203)	"Children with AIDS - The Youngest Victims," <u>Good Housekeeping</u> , August 1988, pp. 106, 107, 149-155.
2. Examine the consequences of choosing unhealthy behaviors on the individual, family, and community.		Marcia Quackenbush and Pamela Sargent, <u>Teaching AIDS - A Resource Guide on Acquired Immune Deficiency Syndrome</u> , Network Publications, Santa Cruz, 1988.



## SAMPLE LECTURE

The acronym AIDS stands for Acquired Immune Deficiency Syndrome. AIDS is a disease that destroys a part of the body's immune system. A person with AIDS, therefore, is susceptible to a variety of uncommon, life-threatening diseases not normally found in healthy people. AIDS is a very serious disease.

Most people believe that AIDS is a gay man's disease. Although this is true, other people can get AIDS too. Heterosexuals, women, teenagers, babies and IV drug users have been infected with AIDS. Currently, in the United States, AIDS is most often found in homosexual and bisexual men. However, more heterosexuals are becoming infected. In some countries, such as several African nations, almost all the AIDS cases are among heterosexuals.

AIDS is caused by a virus. Anyone testing positive for that virus can become ill. The virus is indiscriminate. It infects young and old, men and women, homosexuals and heterosexuals and people of all races.

The AIDS virus is similar to a number of other viruses in that it can cause many different types of symptoms.

1. Some people testing positive to the HIV look and feel very healthy. But these same people are capable of passing the virus on to others. They are called "asymptomatic carriers" because they carry the virus, but display no symptoms.
2. Still other people develop a variety of symptoms related to AIDS, but do not come down with any of the diseases that scientists use to diagnose AIDS. They have ARC (AIDS related complex). These people may be relatively healthy or gravely ill and some may die without being diagnosed as having AIDS.
3. Finally, some people so infected develop a full-blown case of AIDS, the most serious form of the disease. Over 50% of the people in this situation have died. Very few survive beyond five years.

Since asymptomatic carriers often feel healthy, they are not always aware of being infectious. Because of this, AIDS has been difficult to control. The AIDS virus may have an incubation period of from a few weeks to eight years or more. Therefore, it may be a lengthy period of time between when a person becomes infected and when that person first shows symptoms of AIDS.

Fortunately, AIDS is not easy to get. For instance, you cannot get AIDS by touching or being near to someone, by hugging someone or sharing their food and drinking glasses. You cannot get AIDS from swimming pools, water fountains, toilet seats, door knobs or telephones. You cannot get AIDS if someone coughs or sneezes on you. And you cannot get AIDS by donating blood.

You can get AIDS by having very intimate, direct contact with the blood, urine, feces, semen or vaginal secretions of a person infected with AIDS.

Some ways this can happen are:

1. The AIDS virus can pass between two people engaging in oral, anal or vaginal intercourse.
2. The virus can enter the blood stream directly when IV drug users share unsterilized needles or when people share needles used for tatooing and ear-piercing.
3. A few people became infected with AIDS from blood transfusions. However, all blood in the United States is now tested and specialized blood products containing blood clotting factors needed by hemophiliacs are routinely pasteurized to kill the AIDS virus. So the nation's blood supply is considered safe now.
4. Pregnant women infected with AIDS can pass the virus to their babies in the womb. This is because mother and baby share blood systems. Such babies often die before the age of two.

There are no known cases of AIDS being transmitted through other body fluids such as saliva, sweat or tears.

Since the AIDS virus is not transmitted by casual contact and is difficult to get, people developing certain healthy habits can assure themselves of being risk-free.

1. They can carefully consider whether or not they want to have sex with someone else. Abstinence is 100% effective in preventing the sexual transmission of the AIDS virus.

If a person does decide to have sex, use a condom to prevent - body fluids from entering your body during anal, oral or vaginal sex. The proper use of condoms, or rubbers, are usually (but not considered 100%) safe.

2. Never share needles.

Because asymptomatic carriers often show no signs of being infected, it is wise to follow these guidelines at all times and never take risks.

We know that some viruses and bacteria are passed from one person to another through coughing and sharing glasses, etc. So it may be difficult for some people to understand that the AIDS virus is, indeed, hard to "catch". Perhaps this is because AIDS is so deadly a disease. When they think of AIDS, many people think of death and wasting away. This is scary. Some people believe that getting AIDS means you are gay or will thought of as being gay. Others



cannot separate the idea of AIDS from homosexuality and IV drug users and they are afraid of these people. Some low-risk people may even change their sexual habits because of extreme fear of getting AIDS.

The reactions to people with AIDS or with family members and friends with AIDS varies tremendously. Some reactions may be described as hysterical or unreasonable, at least, by some people. Other people would consider the same reactions as being consistent with the seriousness of the disease AIDS. For example, consider the following situation:

In Atascadero, California, Ryan Thomas was born premature. He received blood transfusions and, three years later, was identified as infected with HIV. When Ryan was five, his parents tried to enroll him in Kindergarten. But the school superintendent refused to let him attend school. School officials held several public meetings to discuss the situation. Finally, after a nine-month court battle, Ryan was allowed to go to school. He had to be accompanied by armed police because of bomb threats and threats on his life.

1. Was this a reasonable reaction? Why
2. Were the other children at risk because of Ryan?

After Ryan's situation was publicized over TV and in the newspapers, Robin (Ryan's father) lost his job. He was asked not to return to work and the reason listed on the termination papers was that Robin had quit his job. Because of this, Robin was unable to collect unemployment and he was also unable to find another job. No one would hire him. He was told that he would have to move out of the county if he ever expected to be hired again. It was several months before they could begin to get welfare checks and the family had to rely on handouts for food in the meantime.

1. Should Robin have been able to return to work?
2. Were the other employees at risk of getting AIDS from Robin?

When Ryan's illness became public knowledge, the Thomas' also lost every friend, including those they had known since childhood. Neighbors refused to talk to them. Others shouted insults at the family. When the family entered a restaurant, people got up and left. When they walked down the street, people would cross the street and walk on the other side.

1. Were such behaviors hysterical or reasonable?
- 2. Were any of the neighbors or towns people at risk?
3. Why do you suppose all of these people reacted to Ryan and his parents in this way? Could any of the answers be related to:



- A. Fear of the disease AIDS or of people different from themselves.
- B. Lack of knowledge of what AIDS is and how it is transmitted.
- C. Some of the neighbors, etc., were pessimists, optimists, complainers, problem-solvers and other particular types of personalities
- D. Some people are opposed to homosexuals, IV drug users, etc. and do not want to help or become involved with people with AIDS.
- E. Other

These kinds of reactions and attitudes concerning the disease AIDS and people with AIDS can produce other kinds of results such as 1. unwillingness to support research on the disease, 2. unwillingness to support prevention of or education about AIDS (education is the only known way to stem the epidemic at the present time), and discrimination and mistreatment of the victims of the deadly disease AIDS

## EIGHTH GRADE

**GOAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Discuss the responsibility of the media in giving accurate information about AIDS.

1. Students find a newspaper or magazine article that deals with AIDS and answer questions similar to the following:
  - Who are the people mentioned in the article?
  - How are these people affected by the AIDS crisis?
  - How are these people reacting to the AIDS crisis?
  - Can you tell whether the reporter has an opinion about these people?
  - How can you tell?



# **G r a d e s**

## **9 - 12**



# NINTH - TWELFTH GRADE

GOAL 1: Recognize the causes and characteristics of communicable and noncommunicable diseases.

TEACHER NOTES  
AND RESOURCES

## STUDENT OUTCOMES

## POSSIBLE ACTIVITIES

Students will:

1.1 Abbott Laboratories materials

1. Identify and list the causes, routes of transmission, and symptoms of AIDS and other STDs.

1.2 AIDS myth/fact sheet

1.3 "AIDS Concentration Game"

2. Describe the levels of HIV infection.

1.4 "STD Shuffle"

3. Explain how a healthy immune system functions and what happens when the immune system is invaded by HIV.

2.1 Levels of infection

4. Apply information concerning AIDS to the communicable disease chain.

3.1 Immune system diagram

3.2 Immune system activity sheets

4.1 "Communicable Disease Chain"

4.2 "Communicable Disease Puzzle"





# TEACHER INFORMATION

## INTRODUCTION

Every year five to ten million Americans under the age of 25 get sexually transmitted diseases. Sexually active teens run great health risks when they are exposed to STDs (sexually transmitted diseases) without information about how to prevent and treat them.

Sexually transmitted diseases, formerly called venereal diseases (VD), are perhaps more subject to myth and misinformation than other diseases, because sexual and emotional issues obscure understanding of the diseases themselves. For that reason, this educational kit incorporates detailed information on disease symptoms and prevention in addition to material about sexual responsibility, especially how to talk about STDs with partners. There will also be class discussion on some common emotional reactions to STDs—fear, guilt, and embarrassment.

The kit contains six activities on reproducible spirit masters. Each spirit master will provide up to 200 excellent copies. The masters may also be photocopied. Sheets produced from the spirit masters can be taken home for future reference.

There are four transparencies included in this kit. They are designed to be used in conjunction with specific activities and will be explained in the detailed lesson plans that follow.

The six activities are meant to be used in sequence. We begin with a study of physical manifestations of STDs, follow with risk factors and emotional complications, and conclude with making decisions. The activities are:

- Introduction to STDs
- Eight STDs (chart)
- Understanding Your Risk
- Seeking Help
- Informing Your Partners
- Making Decisions

## PRINCIPLES TO KEEP IN MIND WHEN IMPLEMENTING STD EDUCATION

Complex feelings and beliefs are frequently associated with this topic by students, parents, teachers, administrators, and other members of the community. You, as the teacher, must judge what kind of presentation will work best with your students.

Here are some guidelines that have been useful to other teachers who have implemented an educational program of this type.

- a. The content of STD education will, ideally, correspond to students' needs and levels of maturity.
- b. Effective presentation of the material *must be unbiased* by personal attitudes.
- c. The teacher should model the use of correct terminology from the beginning of the program, defining and translating slang used by students when necessary.
- d. STD education can be introduced between grades 7 and 12, and before grade 7 if there is a clear need. In grades 7-9, the teacher must gauge the maturity of the students and their ability to respond to the information presented.
- e. It is best to provide STD education in co-educational settings. This encourages both sexes to practice communication about health and sexual issues.
- f. Students should be given the opportunity to ask questions anonymously after each lesson.
- g. Information on STDs is most often given in health courses as part of a discussion of communicable diseases. But STD education could also be implemented in science, social studies, or home economics classes.
- h. Involve parents and school officials in planning STD education. If STD education is not already offered in the school, parent and administrative involvement is essential in securing strong support for addressing this problem.

## EDUCATIONAL OBJECTIVES

Any educational program seeks to influence students' behaviors and attitudes. This program has been designed to shift the response of students toward protecting and maintaining their own health and the health of others. At the completion of this course, students will be able to:

- a. Name at least five of the most common STDs and their major health consequences
- b. Name five general symptoms that may indicate an STD.
- c. Name three methods to reduce the chances for getting an STD.
- d. Demonstrate that they can find local or national STD health resources.
- e. State what steps they should take if an STD is suspected.
- f. Make informed health decisions in responding to STD-related problems.
- g. Explain the reasons why partners should be informed of exposure to an STD and describe the possible emotional reactions when they are told.

## SUGGESTED LESSON PLANS

### Lesson 1: Introduction to STDs

#### Objectives:

Name five common STDs and their consequences.

Name five general symptoms that may indicate an STD.

#### Materials:

Transparencies 1 and 2

Activities 1-A and 1-B

Many sexually active teens are unaware of the risk of STDs and measures that can be taken to reduce or eliminate that risk. As an introduction to the idea of responsibility for maintaining one's own health, a risk assessment activity on Transparency 1 begins this lesson. This should be shown to students before any other information is given. This activity functions as a pretest so that students can assess their own risk factors.

Introduce Transparency 1 by saying: "The purpose of this activity is to give you an estimate of your chances of getting a sexually transmitted disease and suffering its consequences. Each statement represents an attitude or practice that may increase or reduce the risk of getting an STD. Add and subtract the numbers according to the directions. At the end, the number you get represents your risk factor. Make a note of this number for later use."

This risk factor number will be used in Activity 2 as students try to think of ways to lower their risks.

Next, distribute Activities 1-A and 1-B. These activities will familiarize students with eight common STDs and their symptoms. Students should read the introductory material on Activity 1-A and briefly scan Activity 1-B. Explain that Activity 1-B is to be used as a take-home reference when this unit is completed.

Point out that while there are many specific symptoms and diseases, sexually active individuals can be alerted to health problems by understanding five general symptoms. Review Transparency 2 with the students and encourage them to make notes of the symptoms on the back of Activity 1-B. Write the following boldfaced points on the board and review them with students.

- a. **No noticeable symptoms**  
STDs frequently have no symptoms. Even males may not show any signs or symptoms.
- b. **Request tests for STDs**  
STD tests are not performed on a routine basis except in STD clinics. If you know you have been exposed to an STD, you should tell your doctor.
- c. **More than one STD at once**  
For instance, it is possible to have gonorrhea and chlamydia at the same time.
- d. **Don't treat yourself**  
The treatment for each STD is different. Leftover medicine, home remedies, or pills available from a friend are very unlikely to cure an STD. Failure to go to a clinic or your doctor is a gamble.
- e. **Take all medication**  
Often symptoms disappear before the germs are completely killed. Unless you take all the prescribed medication, your STD is not likely to be cured.

After reviewing this material, students can match up the columns in Activity 1-A. Tell your students that some false answers are given in Column B. The correct answers are:

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| 1. <b>guilt and fear</b>           | 4. <b>gonorrhea</b>               |
| <b>new forms of birth control</b>  | <b>AIDS</b>                       |
| <b>lack of symptoms</b>            | <b>trichomoniasis</b>             |
|                                    | <b>herpes</b>                     |
| 2. <b>genital discharge</b>        | <b>chlamydia</b>                  |
| <b>itching</b>                     | 5. <b>sexual contact</b>          |
| <b>skin changes</b>                | <b>birth from infected mother</b> |
| <b>abdominal pain</b>              | <b>sharing drug needles</b>       |
| <b>painful urination</b>           |                                   |
| 3. <b>health risks to newborns</b> |                                   |
| <b>pelvic infections</b>           |                                   |
| <b>sterility</b>                   |                                   |

### Lesson 2: Understanding and Reducing Risk

#### Objectives:

Name three ways to reduce the chances of getting an STD.

#### Materials:

Activity 2

Transparencies 3 and 4

You may want to begin this lesson by asking questions for discussion to remind students of some points from Lesson 1. For example,

1. If STDs were transmitted by flies or sneezing, would society have a different view of them?
2. Which group or groups may incur the greatest number of health problems from untreated STDs—women, men, or newborns?

After discussion, present Activity 2.

This activity makes recommendations for ways to reduce the risk of acquiring an STD.

After reading these suggestions, students can view Transparency 3, which illustrates that adding sexual partners increases the risk of getting an STD. The teacher can explain that abstinence means having no sexual partners. Monogamy means that two people have a sexual relationship only with each other. This transparency illustrates that one person with an STD can infect many others.

Students can then view Transparency 4 and assess ten situations, deciding whether the people described are increasing or decreasing their risk factors. Students should write the numbers 1 through 10 on a piece of paper and write "D" next to the number if the person is decreasing his or her risk or that of his or her partner and "I" if risk is increased.

The correct answers are

- |             |              |
|-------------|--------------|
| 1. <b>D</b> | 6. <b>I</b>  |
| 2. <b>D</b> | 7. <b>D</b>  |
| 3. <b>I</b> | 8. <b>D</b>  |
| 4. <b>D</b> | 9. <b>I</b>  |
| 5. <b>D</b> | 10. <b>D</b> |

Finally, students are given the opportunity to write ways in which they might reduce their own risks. You should show Transparency 1 again to remind students of their risk factors. During this exercise, it will be important to point out to students that no one else will see their answers. Once again, provide an opportunity for anonymous questions.



### Lesson 3: Seeking Help

#### Objectives:

*Demonstrate that students can find local or national health resources.*

#### Material:

##### Activity 3

Activity 3 will help students familiarize themselves with national and local health resources.

Activity 3 is divided into three parts. The first part is a list of steps that must be taken if a student suspects he or she has been exposed to an STD. Students will then rank traditional sources of help beginning with those that they feel most comfortable talking with to those they feel least comfortable approaching. Their rankings and some of their rationale may then be discussed in class. The purpose of this exercise is to help students begin to formulate an action plan that they could use if ever confronted with the necessity.

In the third segment of this activity students are given a general overview of resources for seeking information and/or help. Students are then asked to pick one question from a list and to discover its answer through a local health resource. Again, the purpose is to help students become familiar with local resources before they find themselves in a situation clouded with fear and pressure.

The answers to these questions and the sources of information used will be of interest to most of your students and may be discussed in class.

You may want to invite a health professional from a local health agency (for example, the county medical society) to speak to your class. The content of such a presentation is likely to lend reality and immediacy to the information and guidance offered by these materials.

### Lesson 4: Informing Partners

#### Objective:

*Explain why partners should be told if they have been exposed to an STD.*

#### Material:

##### Activity 4

Activity 4 leads into discussion of the emotional issues that often accompany an STD diagnosis. Students are asked to speculate concerning some of the feelings people might have about informing a sex partner that he or she has been exposed to a sexually transmitted disease.

There are, of course, no right or wrong answers in this discussion. But students may be helped to understand that people may feel guilty about having transmitted a disease. They may feel angry because they were exposed to a disease, or may fear that their partners will be angry at them. Some may feel shame or embarrassment because they engage in sexual activity. Some are reluctant to inform a partner because they will have to confront issues of infidelity or multiple sexual partners. These are only a few of the possible reasons for hesitating to tell a partner, and students should be encouraged to understand and empathize with those facing such a dilemma.

Activity 4 increases student awareness of why it is important to help partners get treatment in spite of emotional obstacles.

Finally, this activity presents students with a hypothetical situation and asks them to formulate possible approaches to telling partners at risk.

To answer questions 1 and 2, remind students to refer to the chart on Activity 1-B. Question 3 may be answered from the material contained in Activity 4. The answers to question 4 will depend on the individual student. In general, the teacher should help students formulate approaches that are tactful, honest, direct, and non-judgmental.

### Lesson 5: Making Decisions

#### Objective:

*To develop the ability to make informed decisions regarding STD-related problems.*

#### Material:

##### Activity 5

Students are presented with four hypothetical situations and asked to comment on the logic and the decisions reached by the people in each story. The following points should be elicited during class discussion:

##### Situation 1

Students should recognize that chlamydia frequently has no symptoms, and Greg's partners may not be aware that they have it.

If his partners are not treated, they may spread the disease as well as risk long-term health consequences.

##### Situation 2

Students should demonstrate awareness that tests for STDs are not a part of standard physical exams and that these tests must be requested by the patient.

If Jackie does have gonorrhea and is not treated, she may reinfect her boyfriend or others. Both run the risk of long-term health consequences.

##### Situation 3

Students should show understanding that though birth control pills prevent pregnancy, they do not prevent the spread of disease. Students should state that, even if Cynthia does not have symptoms, she could have an STD. Robert is running a greater risk by abandoning his decision to use a condom. He could explain to Cynthia that use of a condom protects her as well as him.

##### Situation 4

Students should be able to point out that Steve may have herpes, a disease in which the symptoms disappear and recur with varying frequency. Steve makes several mistakes. He will not discuss health concerns with his partner, he waits before seeking treatment, he is not honest with his partner about the possibility of infection, and he mistakes the disappearance of symptoms for a "cure." Steve risks infecting his current and future partners.

## C ONCLUSION

At the end of this educational program it is important to once again offer students the chance to ask anonymous questions.

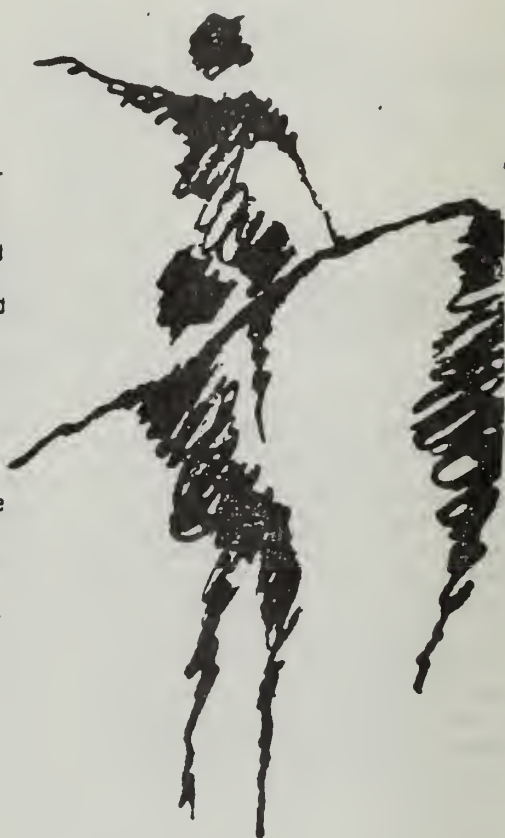
If you feel that your students would benefit from further information about sexually transmitted diseases, write to:

**American Social Health Association**  
260 Sheridan Avenue  
Palo Alto, CA 94306

In your local area, most libraries, clinics, and health departments carry books and brochures that can enhance the information contained in this program

The American Social Health Association is the only national non-profit agency singularly dedicated to the prevention and control of sexually transmitted diseases. ASHA information programs include the Herpes Resource Center and the VD National Hotline. ASHA has long been involved in health education and has conducted numerous professional, public, college and high school education programs.

Abbott Laboratories is a worldwide health-care company devoted to the discovery, development, manufacture, and sale of a broad and diversified line of human health-care products. Abbott has developed a line of tests to diagnose sexually transmitted diseases, including chlamydia, gonorrhea, hepatitis, and AIDS. Educational pamphlets on these topics can be obtained by writing to "STD Pamphlets," Dept. 383M, Abbott Laboratories, Abbott Park, IL 60064.





**E**ach year 5-10 million Americans under the age of 25 get sexually transmitted diseases (STDs). STDs were once called venereal diseases (VD). The two primary diseases were syphilis and gonorrhea. Today, we know that there are more than 20 STDs.

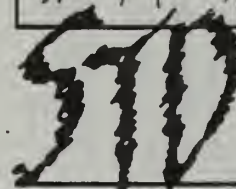
Many things contribute to the spread of STDs in spite of advances in medical knowledge:

- Because they are transmitted primarily through sexual contact, these diseases cause some people to experience guilt, fear, and embarrassment when they suspect they have been exposed to an STD. These feelings prevent some from seeking the necessary diagnosis and treatment.
- In many cases men and women experience no symptoms even if they have an STD. Frequently the symptoms of an STD can disappear with no treatment, *even though the disease has not been cured*. There are tests

that make it simple to diagnose almost every STD. However, these tests are not part of a standard physical exam and must be requested by individuals who think they might have an STD. In most cases, there are specific treatments for each STD.

- Modern methods of birth control (for example, the pill) do not provide the same degree of protection against STDs that older methods do. Older methods of birth control such as condoms, diaphragms, and chemical barriers (creams and foams) often prevent diseases from being transferred from one partner to another.
- Many people are not knowledgeable about these diseases or what symptoms to look for in themselves and others. The purpose of this course is to increase your awareness and knowledge of STDs so that you can protect yourself and others.

### Introduction to STDs



SEXUALLY  
TRANSMITTED  
DISEASES

**Y**our teacher will provide further information on STDs and their symptoms. Using all of this information, answer the questions in Column A by choosing the correct words and phrases from the list at the right:

#### COLUMN A

- These factors may account for the increase in STDs.  
\_\_\_\_\_
- These are the most common symptoms of STDs.  
\_\_\_\_\_
- These are some of the long-term dangers if an STD is untreated.  
\_\_\_\_\_
- These are some names of STDs.  
\_\_\_\_\_
- This is how STDs are transmitted:  
\_\_\_\_\_

#### COLUMN B

- guilt and fear
- genital discharge
- itching
- gonorrhea
- discovery of penicillin
- AIDS
- new forms of birth control
- nosebleed
- lack of symptoms
- trichomoniasis
- sharing drug needles
- skin changes
- damage to newborns
- toilet seats
- herpes
- chlamydia
- pelvic infections
- sexual contact
- abdominal pain
- birth from infected mother
- painful urination
- trichinosis
- sterility

DISEASE	FEMALE SYMPTOMS	MALE SYMPTOMS	POSSIBLE PROBLEMS	OTHER THOUGHTS	NUMBER AFFECTED EACH YEAR
Gonorrhea	Women may not notice symptoms. Or, may have pus-like vaginal discharge, lower abdominal pain, painful urination.	Pus discharge from penis. Pain when urinating.	Sterility, repeated pelvic infections in women, damage to newborns.	Curable with proper treatment.	2 million
Chlamydia	No symptoms for 60-80% of women. Some may have vaginal discharge, pain when urinating, dull pelvic pain or bleeding between menstrual periods.	No symptoms for 20-40% of men. Others may have painful urination or watery discharge from penis.	Infertility in men and women, eye and lung infections in newborns.	Once identified, chlamydia can be cured painlessly with antibiotics.	2-3 million
Genital Herpes	One or more blister-like sores on, in or around the genitals. Sore may look like a rash or cut and is not always painful. Symptoms go away.	Can cause severe damage to infants of mothers with active infections at the time of delivery.	Can cause severe damage to infants of mothers with active infections at the time of delivery.	Caused by virus. Can be treated, but not cured. Repeated flareups may occur after the first infection.	500,000 new cases
Syphilis	A sore, usually painless. Later rash may develop on other parts of the body (usually hands and feet). There may also be sore throat, fever, swollen glands. Symptoms disappear.	Heart, spine and brain may be affected. Severe threat to developing fetus.	Detected by simple blood test. Cured with antibiotics.		90,000
Hepatitis B	Symptoms vary a great deal. Some people have no symptoms. Others experience loss of appetite, fever, tiredness, pain in liver area, jaundice (yellowing of the skin).	Major cause of liver cancer. May cause death. Can be transmitted to newborns by mother.	A vaccine is available to prevent Hepatitis B.		200,000
AIDS	For both sexes, early symptoms may be recurring fever, night sweating, shortness of breath, dry coughs, constant tiredness, diarrhea, rapid weight loss, swollen glands or increase in severity or number of illnesses.	No cure has yet been found. AIDS has been fatal in more than 50% of the cases.	AIDS is caused by a virus that can be transferred during sexual contact or when sharing needles during IV drug use.	The number of reported cases has roughly doubled every year. The two groups most severely affected have been gay and bisexual men and IV drug users although anyone can get AIDS.	
Genital Warts	Warts found on or around genitals or rectum. They must be treated by a doctor.	Can grow large and obstruct penis, vagina or anus.	Genital warts have been strongly linked to the development of genital cancers.		1-2 million
Trichomoniasis	Vaginal itching, often severe. Heavy vaginal discharge, often green/yellow, with strong smell.	Partners may frequently pass this disease back and forth leading to repeat infections.	Curable but both partners must be treated		3 million



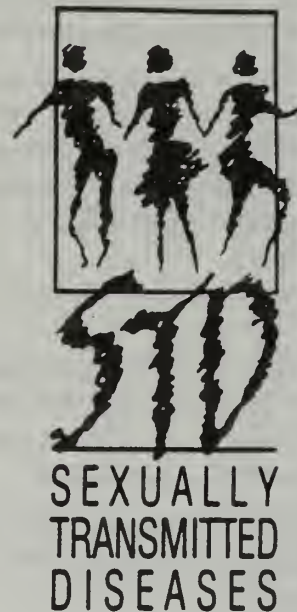
**A**s with other diseases, it is important for you to assess your risk of getting an STD. You can then decide what steps you can take to minimize the risks to your health. Here is a list of things that you can do to reduce the possibility of getting an STD.

- a. **Practice abstinence** — not having sex is, obviously, a foolproof way to avoid sexually transmitted diseases.
- b. **Practice monogamy** — having sex with only one partner who has sex only with you greatly reduces your risk.
- c. **Practice prevention** — use a condom (also known as a "rubber" or "prophylactic"). Properly used, a condom will prevent many
- STDs. Diaphragms, foams, jellies, and creams may add extra protection.
- d. **Reduce your number of partners** — the more partners you have, the more you increase your chance of getting an STD.
- e. **Behave responsibly with partners** — discuss health concerns with partners and know STD symptoms.
- f. **Wash and urinate after sexual contact** — (not guaranteed, but soap and water may help wash away germs, especially for men).
- g. **Request tests for STDs** — pregnant women, especially, should do this to protect fetus and newborn.

### Understanding Your Risk

**T**he following will not be discussed in class. This is for your information only.

1. My personal risk factor is \_\_\_\_.
2. If my risk factor is over 5, here are some ways I can bring it down.
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_





In spite of the information people have and the actions they might take to decrease their risk, some people will still get an STD at some point in their lives. It is important to remember that most of the diseases that we have discussed can be cured. For many, if treated and cured early, there will be no long-range health effects.

If you suspect you have an STD:

- a. Stop having sex.
- b. Call for an appointment with an STD clinic or health professional. You will be given tests

that will determine if an STD is present. Most STDs are diagnosed through either a blood test or a culture test. A blood test requires a small sample of blood from the patient's arm. In a culture test, a sample of fluid is taken from the patient's genitals with a cotton swab. Proper treatment will then be prescribed.

- c. Notify your recent sex partner(s) of a positive diagnosis and help them get treatment.

### Seeking Help

Many teenagers feel reluctant to seek help if they suspect they might have an STD. At the right is a list of places and people that can be consulted for support and assistance.

Rate these in order, starting with where you would feel most comfortable to where you would feel least comfortable discussing this problem. Write down a brief reason for your feelings about each possibility. Use the back of this page.

**Father**  
**Mother**  
**Family doctor**  
**Public health clinic**  
**Anonymous hot line**  
**Friends**  
**Guidance counselor/school nurse/teacher**  
**Clergy**  
**Sister/brother**  
**Boyfriend/girlfriend**  
**A doctor you don't know.**  
 Discuss this list and your ratings in class.

The more places and people you can approach for support and the more information that you can get, the more quickly you can solve whatever problem faces you.

Below are some places that may be available for testing, treatment, and information in your community.

#### Family doctor

#### Family planning clinics

#### Hospitals

**Health department** (May be listed in the phone book under health services or public health. It is usually listed with county or city government offices.)

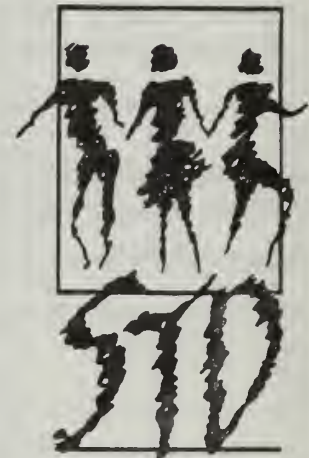
#### Local telephone crisis hotline

**VD National Hotline** (1-800-227-8922; in California, 1-800-982-5883)

To help you identify your local resources, and familiarize yourself with their services, pick a question from the list below and get the answer from a local agency.

1. Do any of the STD clinics in your community offer free services?
2. Which STD health resource is closest to your school?
3. At what age can minors be diagnosed and treated for an STD without their parents' permission?
4. Do any of the STD clinics have evening or weekend hours?
5. Can you get brochures or pamphlets explaining STDs from any of the local resources?

In your next class, discuss what you have learned.



**SEXUALLY  
TRANSMITTED  
DISEASES**

**A**fter taking the first step of seeking treatment, those who have STDs must take another important step— notifying their sex partners and helping them get treatment.

This step is important in order to:

- stop illness in your partner and prevent serious health consequences.

- protect yourself from reinfection. Many times partners will pass an STD back and forth unless both are treated at the same time.

- stop the possible spread of STDs to others.

### Question for Discussion

Can you think of things that make it difficult to tell sex partners about a diagnosis of an STD?

**W**hile informing partners isn't always easy, here are some recommendations for handling what can be a difficult or embarrassing situation.

- The ideal solution is for partners to go to the clinic or doctor together. They can provide support for each other, and if both are treated at the same time, there will be no reinfection.
- If individuals seek treatment on their own, health personnel at the clinic will help them

find ways to talk to partners in person or over the phone. All clinics offer confidential and private services. Most clinics offer the services of specialists who can talk to partners if patients do not feel comfortable doing so. Finally, it is possible to write a letter to a partner. But this should be done only if you can insure that no one else will read it and that there will be no delay in delivery of the letter.

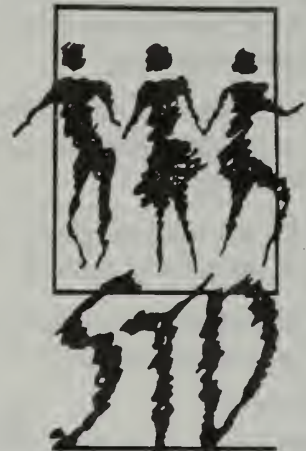
**R**ead the situation below. In class, discuss the questions that you will find at the end of the story.

Carla notices an unusual vaginal discharge and makes an appointment at her county health clinic. She is diagnosed as having gonorrhea. At the clinic she has a choice of giving the names of her recent sex partners to the doctor, or calling them herself. Carla asks the clinic to call all but one of her partners. She is still seeing Jack and wants to talk with him herself. She is very nervous about doing this. Jack has had sex only with her. If he does have gonorrhea, he got it from her.

### Questions

1. Carla went to the doctor because she noticed a vaginal discharge. What other symptoms might she have had?
2. What symptoms of gonorrhea might Carla have noticed in her male sex partners?
3. What choices does Carla have in the way she tells Jack that he may have an STD?
4. What approach for telling Jack would you recommend— should Carla talk to him in person, call him, or send him a letter? Depending on which approach you choose, what exactly would you say to Jack?

### Informing Your Partners



**SEXUALLY  
TRANSMITTED  
DISEASES**



**A**s with other issues concerning health, decisions made now can have long-term effects. The key to sexual decision-making is responsible behavior—accepting responsibility for your own health, and behaving responsibly toward sexual partners.

Read the following hypothetical situations and answer the questions that follow:

### SITUATION 1

Greg has had four partners in six months. Three weeks after his last sexual experience he noticed a watery discharge from his penis. He is tested at a clinic and discovers that he has chlamydia. He begins treatment and is told to abstain from sex until treatment is over and to inform his partners that they will need treatment, too. Greg decides he will abstain from sex. He is no longer seeing any of his four partners and decides not to notify them, thinking that if they have chlamydia they will notice the symptoms themselves.

- Do you think Greg is right in his decisions 1) to abstain from sex and 2) not to inform his partners?
- Give your reasons for agreeing or disagreeing with both of his decisions.
- What might happen to Greg's former partners if they don't seek help?

### SITUATION 2

Jackie is told by her boyfriend that he has gonorrhea and that she may have it, too. He urges her to go to the clinic that helped him. Jackie decides that she is too embarrassed to go to a clinic. She makes an appointment with her family doctor for a regular check up but does not tell her that she has been exposed to gonorrhea. Instead, she tells herself that the doctor will know if there is anything wrong with her.

- Is Jackie correct in her thinking? Why or why not?

- What does Jackie need to do to be more responsible for her own health?
- If Jackie does have gonorrhea and does not seek treatment, what might happen to her? to her boyfriend?

### SITUATION 3

Robert meets Cynthia at a party and is very attracted to her. When he takes her home they decide to have sex. He has learned about STDs in health class and has decided to use condoms to protect himself and his partners. However, Cynthia says she is taking birth control pills and knows she doesn't have any disease. She says using a condom is too much of a hassle. Robert decides not to use one.

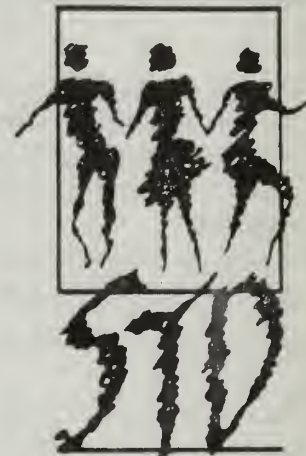
- Do you agree or disagree with Cynthia's reasoning?
- Why do you think Robert behaved as he did?
- Could Robert have made a different decision? If so, how could he have handled it with Cynthia?

### SITUATION 4

Steve noticed a cluster of watery and painful blisters on his penis. He has had one partner for the past three months but feels shy about discussing health concerns with her. He decides to wait a week before seeking medical treatment, thinking "this is probably nothing serious." He makes up excuses for not having sex with his partner for a week and then, to his relief, the blisters begin to disappear. Steve decides he is cured and that he will have sex with his partner when the sores are no longer painful.

- What disease might Steve have?
- What health mistakes does Steve make?
- If Steve does have an STD what risk does he run by not seeking treatment? What is the risk to his partner?

## Making Decisions



**SEXUALLY  
TRANSMITTED  
DISEASES**

## What Is Your Risk?

1. Begin with zero.
2. If your age is 11-15, add 5 points.
3. If your age is 16-20, add 7 points.
4. Add three points for each sex partner during the last year
5. Subtract one point for each partner you knew for at least six months before having sex
6. Subtract one point for each partner with whom you discussed STDs and risk factors
7. Subtract three points if you do or would use a condom with every sexual contact, two points if you would use one at least half of the time, or one point if you would only use one sometimes.
8. Subtract two points if you understand STD symptoms and would seek help immediately after identifying one.

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Low Risk	0-5
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Moderate Risk	6-10
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Serious Risk	11 +
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# Important STD Symptoms

The following may or may not be STD symptoms. But if you have these symptoms they should be checked out.

## 1. Genital discharge

TYPES: white, yellow, green, clear and watery, thick, containing pus, foul or bad odor

## 2. Abdominal Pain—

most common in women

## 3. Painful Urination—

burning and/or frequent

## 4. Skin changes

TYPES: sores, rashes, blisters, warts

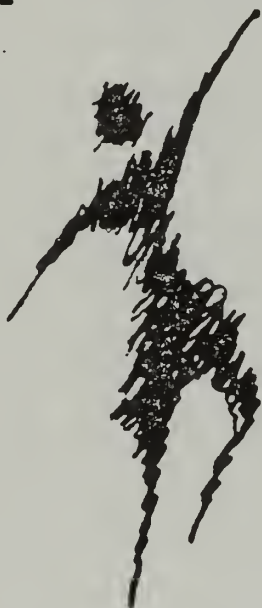
## 5. Genital itching



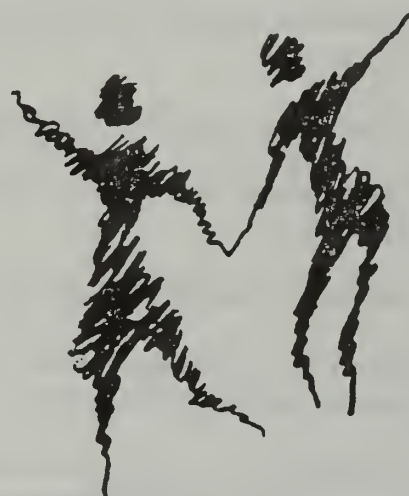


## How Infection Spreads

**SEXUAL ABSTINENCE =  
NO RISK**

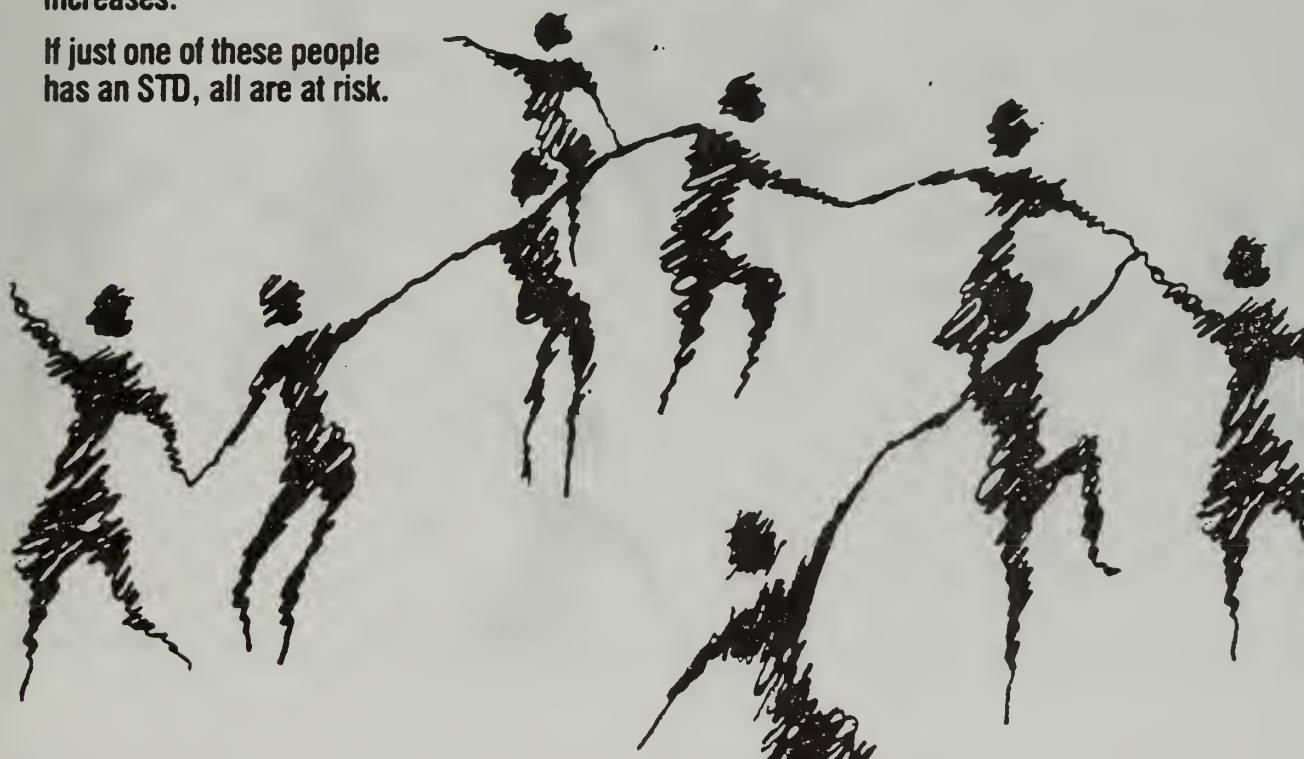


**ONE PARTNER =  
SLIGHT OR NO RISK**



**With each new partner, risk  
increases.**

**If just one of these people  
has an STD, all are at risk.**



## Reducing Risk

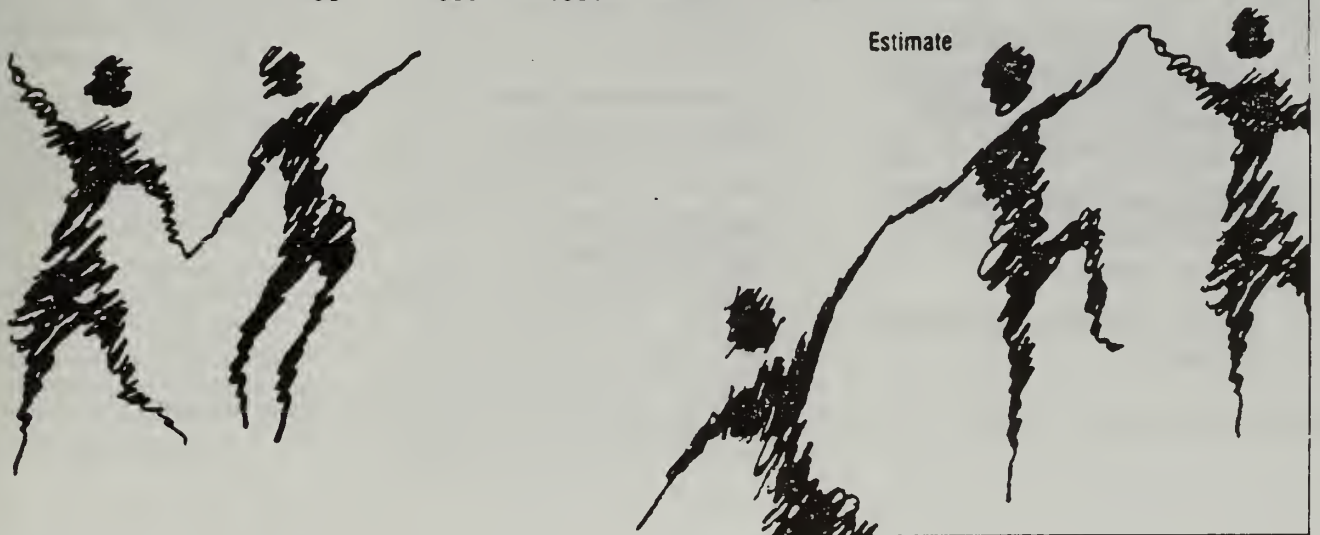
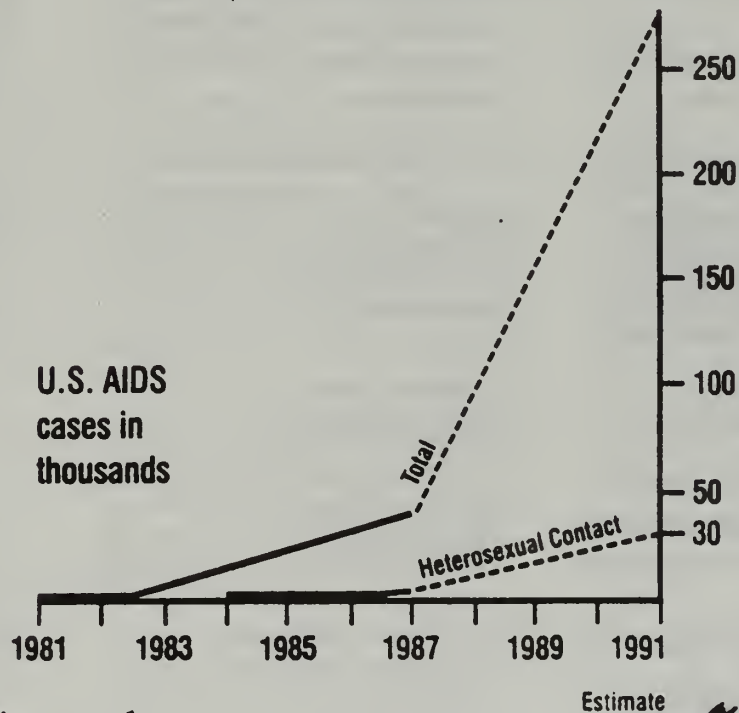
1. Steve always uses a condom during sexual activity.
2. Maria and Bob have sex only with each other
3. George uses withdrawal to prevent STDs.
4. Sally has decided not to be sexually active
5. Carl always discusses health concerns with his partners before having sex
6. Rich has had ten sex partners in the past six months.
7. Samantha asks her doctor to test for STDs when she has a check up.
8. Stan washes with soap and water every time he has sex.
9. Bill hates to go to doctors, and whenever he notices a symptom he just waits for it to go away
10. When Lila notices an unusual vaginal discharge, she abstains from sex until she has it checked out.





## AIDS: A Growing Danger

1. In the United States, more than 30,000 AIDS cases have been reported as of 1987 and another 1.5 million people are thought to have the virus.
2. By 1991, AIDS cases transmitted by heterosexual contact may equal the number of AIDS cases found among all groups in 1986.
3. If the epidemic continues to spread at its current rate, the total number of projected cases will reach 270,000 over the next five years and deaths will rise to 179,000.



You have already learned some facts about AIDS from the STD program just completed. You may have picked up other information by reading newspapers, watching television and talking to people about AIDS. This exercise is designed to allow you and your classmates to see how much of what you know is fact and how much is rumor or myth. You will not be graded on this exercise and you are not expected to be right on every answer.

Read the ten statements below and mark each one true or false. A class discussion will follow.

1. AIDS can be passed from one person to another by sneezing and coughing. \_\_\_\_\_
2. People who are gay or those who use intravenous drugs are the only ones who risk getting AIDS. \_\_\_\_\_
3. There is no cure for AIDS right now. \_\_\_\_\_

## PART 2

Using all of the information you have gathered so far, including class discussion, lectures, and Activity 1B answer the questions in Column A by choosing the correct words and phrases from Column B.

For discussion in class, think about this statement:

When you decide to have sex with someone you are also having sex with every partner he or she ever had.

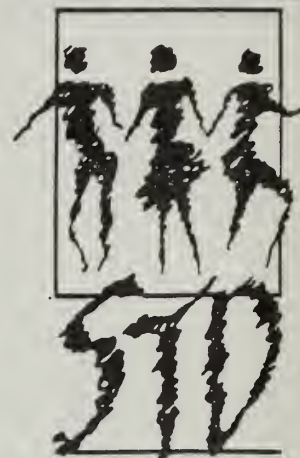
## PART 3

- A. What ways can someone prevent the transmission of the AIDS virus? Do you think people—when told—will put these ideas into practice?
- B. What obstacles or problems might someone have in talking about drugs, sex, or AIDS with a partner?
- C. Can you suggest ways to overcome these problems?

4. A blood test exists that will tell whether or not a person has AIDS. \_\_\_\_\_
5. You can get AIDS by donating blood. \_\_\_\_\_
6. Most of those people infected with the AIDS virus have no symptoms and appear to be healthy. \_\_\_\_\_
7. Swollen glands, low grade fever and unexplained weight loss are some of the symptoms of AIDS-Related Complex. \_\_\_\_\_
8. Any person who is sexually active can get AIDS. \_\_\_\_\_
9. Research has shown that the AIDS virus is not transmitted in families by everyday contact such as hugging, sharing food, towels or even toothbrushes. \_\_\_\_\_
10. The AIDS virus is transmitted by sexual intercourse and sharing of needles used for illegal drugs. \_\_\_\_\_

## COLUMN A

1. Two diseases that may result from AIDS.  
\_\_\_\_\_
2. Three major ways to transmit the AIDS virus.  
\_\_\_\_\_
3. The body's protection against infection.  
\_\_\_\_\_
4. These substances form in the blood to fight infection.  
\_\_\_\_\_
5. The two body fluids most likely to transmit the AIDS virus.  
\_\_\_\_\_
6. These activities will not transmit the AIDS virus.  
\_\_\_\_\_

AIDS  
SupplementSEXUALLY  
TRANSMITTED  
DISEASES

## COLUMN B

1. immune system
2. blood
3. Kaposi's sarcoma
4. sexual intercourse
5. hugging
6. birth from infected mother
7. sharing towels
8. sharing drug needles
9. pneumonia
10. working with someone who has AIDS
11. semen
12. antibodies



## **S**UPPLEMENTARY LESSON:

### **Understanding AIDS**

#### **Objectives:**

*Demonstrate general understanding of AIDS.*

*Demonstrate understanding of how the AIDS virus is transmitted.*

*Demonstrate knowledge of AIDS prevention techniques.*

#### **Materials:**

*Transparency 5*

*Activity 6*

This supplement is divided into three parts. Part 1 aims to give complete and accurate background information about AIDS and to correct the myths and misinformation that have circulated since the epidemic was recognized. Part 2 details the process of exposure to and transmission of the AIDS virus. Part 3, perhaps most importantly, describes how individuals can protect themselves from AIDS. Each teacher can exercise his or her own judgment as to presenting the material in one, two or three separate lessons. Transparency 5 and Activity 6 will be described in the teacher's guide as appropriate.

## **P**ART 1

Begin by asking students to respond with "true or false" to the 10 statements that appear in the first column of Activity 6. The purpose of this preparatory exercise is to enable teacher and students to discuss and correct initial faulty ideas about AIDS and to reinforce accurate information.

After the students have completed the true-false warm-up activity, discuss each of the 10 statements. Begin by asking students to indicate by raising their hands whether they have answered true or false to statement one.

Statement one is false. Encourage the students who answered correctly to give reasons why they answered as they did, a process that will facilitate discussion. Continue in this way with all 10 statements. The following is a list of the correct answers and important points to underscore or elicit during class discussion.

**1. False.** Students should understand that everyday living does not present any risk of infection. According to the U.S. Surgeon General's Report on AIDS, "Casual social contact such as shaking hands, hugging, social kissing, crying, coughing or sneezing will not transmit the AIDS virus. Nor has AIDS been contracted from swimming in pools or bathing in hot tubs or from eating in restaurants (even if a restaurant worker has AIDS or carries the AIDS virus). AIDS is not contracted from sharing bed linens, towels, cups, straws, dishes or any other eating utensils. You cannot get AIDS from toilets, doorknobs, telephones, office machinery or household furniture. You cannot get AIDS from body massages, masturbation or any non-sexual contact."

**2. False.** Although the initial discovery was in the homosexual community, AIDS is not a disease only of homosexuals. AIDS is found in heterosexuals, people of all colors, men, women and children. According to the Surgeon General's report, infection results from a sexual relationship with an infected person or from injecting illegal drugs with needles or syringes previously used by an infected person.

**3. True.** Worldwide, research is underway to find a cure for AIDS. Nevertheless, discovery of a cure or a vaccine is probably some years away. Presently there are experimental treatments for AIDS such as the drugs AZT and Ribavirin. These drugs are believed to slow the multiplication of the virus but neither eliminates the virus from the body.

**4. False.** The blood test called the ELISA test can screen blood to detect the presence of the antibody to the AIDS virus. A positive test does not mean that a person has AIDS or will get AIDS. It means that the individual has been infected with the virus that causes AIDS and could infect others with whom he or she exchanges body fluids—primarily blood and semen. This test is not a diagnosis. There is no single, simple test for AIDS, itself. AIDS is, however, a condition that can develop from infection with the AIDS virus. The virus weakens or destroys the immune system leaving the body vulnerable to life-threatening diseases caused by bacteria, fungi or other viruses. AIDS is diagnosed when one or more "opportunistic" diseases are found that

would not appear in people with healthy immune systems. Most common of these opportunistic diseases are Kaposi's sarcoma (a form of cancer) and Pneumocystis carinii pneumonia (PCP)—a rare form of pneumonia.

**5. False.** Only disposable needles are used at blood collection centers. These needles are never re-used. Therefore, there is no risk whatsoever in donating blood.

**6. True.** Not everyone who has the AIDS virus has developed AIDS. The virus is believed to remain in the blood for life and all those with the AIDS virus should consider themselves contagious. Between 10% and 40% of those with the virus will eventually develop AIDS within five years.

**7. True.** Some people who are infected with the AIDS virus will develop symptoms, but not the specific illnesses required for an AIDS diagnosis. These people are said to suffer from AIDS-Related Complex (ARC). The ailments that characterize ARC range from mildly swollen glands, low grade fever and unexplained weight loss to various degrees of immune deficiency and infections. For every AIDS patient 10 people may suffer from ARC. Preliminary studies suggest that from 10% to 30% of the estimated 350,000 ARC patients throughout the nation will eventually develop AIDS.

**8. True.** Men and women, homosexual and heterosexual, can get AIDS, if they don't take precautions.

**9. True.** See explanation number 1.

**10. True.** See explanation number 2.

The next two parts of this lesson focus on transmission and prevention. Before continuing, show Transparency 5 to the class. Transparency 5 will demonstrate graphically the number of people with AIDS, and the increase in cases in the heterosexual population.

## PART 2

Part 2 covers the major ways the AIDS virus is transmitted and reinforces the difference between casual contact and the contact necessary to transmit the AIDS virus.

In opening remarks to students emphasize that AIDS is not transmitted by casual contact and that AIDS is actually hard to get. The virus must get from the blood of the infected person into the blood of an uninfected person. This usually happens through an exchange of body fluids, most commonly blood and semen. The virus travels by means of the following behaviors:

1. Sharing needles during drug use.
2. Sexual intercourse with a person who is already infected with the virus.
3. Infected mother to fetus.

Ask students to complete Part 2 of Activity 6 to check for understanding of the preceding material. The correct answers are listed below:

- |                            |                                   |
|----------------------------|-----------------------------------|
| 1. Kaposi's sarcoma        | 4. Antibodies                     |
| Pneumonia                  | 5. Blood Semen                    |
| 2. Sharing drug needles    | 6. Sharing towels                 |
| Sexual intercourse         | Working with someone who has AIDS |
| Birth from infected mother | Hugging                           |

### 3. Immune system

After reviewing the correct answers ask students to think about the statement in Part 2 of Activity 6. Give students a few moments to react silently to this statement and then provide an opportunity for class discussion. If necessary, stimulate discussion with the following questions:

1. What does this statement mean?
2. In light of this statement, how important is it to know each partner very well?
3. What questions might someone have for a future partner based on this statement?

4. How well can anyone know a potential partner? (Teachers will want to elicit this primary point: knowing partners well enough to decide whether or not they have the AIDS virus is impossible. Even partners who are being as honest as they can about their own pasts, may not know the histories of their former partners. Students should understand that the only way to be safe is to use a condom—and use it correctly—or not to have sex at all.)

## PART 3

While it is important to have current information about AIDS, teens may have difficulties in implementing what they have learned for a variety of reasons.

Part 3 of Activity 6 provides a format for class discussion of the points raised in this AIDS supplement.

Remember, transmission of the AIDS virus is by the exchange of body fluids (particularly blood and semen). The use of condoms during sexual activity is believed to protect both partners from exchange of the AIDS virus, as long as the condom is used correctly from the beginning to the end of sexual activity, and the condom does not break.

While students review Activity 2 "Understanding Your Risk," the teacher should make three columns on the chalkboard, listing at the head of each, one of the major ways that the AIDS virus is transmitted—sharing needles, sexual intercourse and birth from an infected mother.

After students have reviewed Activity 2, the teacher should commence with the first question of Part 3 on the activity master.

Ask students to consider each question carefully and make notes on the back of Activity 6, if necessary, prior to class discussion. Suggestions follow as to points to elicit during discussion.

A. Possible responses are:

### Sharing needles

Don't use IV drugs.

Don't share drug needles.

### Sexual intercourse

Don't have sex.

Always use condoms and spermicides

Limit the number of partners.

Find out partner's sexual history and whether person has practiced any risky behaviors.

Don't exchange body fluids—blood or semen.

### Birth

Use birth control.

Have antibody test before considering pregnancy.

Encourage class discussion and debate about whether or not teens will put these recommendations to use.

B. Encourage students to brainstorm. Expect answers such as embarrassment, lack of knowledge, implication that person is gay, peer pressure to take risks, feeling that "it won't happen to me" (denial).

C. Acknowledge that the obstacles listed above are real. Encourage students to weigh the benefits of protection against the embarrassment and awkwardness of using condoms and communicating about specific sexual activities. Point out that partners often appreciate the concern expressed.

Students should mention the trust and closeness that are necessary to discuss sexual topics. There's a saying "If you don't feel close enough to talk about sex with a person, you may not be close enough to have sex with that person."



## AIDS FACTS

Condoms used with spermicides containing nonoxynol-9 provide excellent, though not 100% effective, protection against transmission of the AIDS virus, since condoms sometimes break or are used incorrectly.

As of early 1987 it is estimated that 1-2 million people in the United States are infected with the AIDS virus. Of these about 350,000 have developed ARC and 30,000 have been diagnosed with AIDS. Experts believe that 10-40% of those with the virus will eventually develop AIDS.

Incubation period for AIDS can vary from 6 months to 15 years. Because of the possibility of a long incubation period many people can transmit the virus before they know they are infected.

The average person with AIDS dies within two years after diagnosis. Over 50% of those diagnosed have already died. So far, no one diagnosed with AIDS has recovered.

No one knows exactly where AIDS came from. It was first recognized in the U.S. in 1981, although the first case can be traced back to 1978.

For further information you can call:

**The National AIDS Hotline**  
**1-800-342-AIDS**  
**24 hrs., 7 days a week**

## GLOSSARY

**Acquired** — a condition which is not inherited or present from birth.

**AIDS** — (Acquired Immune Deficiency Syndrome) — a serious condition characterized by a defect in the natural immunity against disease.

**Antibody** — protein substance developed by the body to fight disease organisms.

**ARC** — (AIDS-Related Complex) — characterized by a prolonged (two weeks or more) fever, unexplained weight loss, swollen lymph nodes, and/or fungus infection of mouth and throat.

**Deficiency** — a breakdown or inability of certain parts of the immune system, making a person more susceptible to certain diseases to which the person would not ordinarily be subject.

**ELISA** — (Enzyme Linked Immunosorbent Assay) — a testing method to detect antibodies to HIV (Human Immunodeficiency Virus) — the virus that causes AIDS.

**Immune System** — the body cells that recognize foreign organisms or substances, neutralize them, and recall the experience later when confronted with the same organisms.

**Kaposi's Sarcoma** — a type of cancer usually occurring on the surface of the skin or in the mouth; may also spread to internal organs.

**Opportunistic Infections** — illnesses which would not be serious to anyone whose immune system is functioning normally.

**PCP** — (Pneumocystis Carinii Pneumonia) — a parasitic infection of the lungs; the most common opportunistic infection in AIDS patients.

**Safe Sex** — also known as "Safer Sex" or "Healthy Sex;" a system of classifying specific sexual activities according to their risk of transmitting the virus; "safe sex" guidelines are used by people to avoid high risk behavior without having to give up sexual activity; those acts which are defined as "safe" involve no exchange of body fluids.

**Syndrome** — a group of symptoms and diseases that together are characteristic of a specific condition.

**Virus** — minute, parasitic disease-causing organism that depends on cells for its growth; not affected by antibiotics.



Health Care Worldwide

**W**as this program useful to you and your class? The American Social Health Association and Abbott Laboratories would like to know how you feel about the teaching materials in this packet. Would you take a moment to answer the questions below and return this form to us? Thank you.

1. With what grade(s) and class(es) did you use this program?

2. With how many students did you use this program? \_\_\_\_\_

3. Was the teacher's guide \_\_\_\_\_ very helpful in presenting program? \_\_\_\_\_ fairly helpful in presenting program? \_\_\_\_\_ not helpful in presenting program?

Comments: \_\_\_\_\_

4. Were the activity masters \_\_\_\_\_ very easy to use and understand? \_\_\_\_\_ fairly easy to use and understand? \_\_\_\_\_ difficult to use and understand?

Comments: \_\_\_\_\_

5. Were the transparencies \_\_\_\_\_ very easy to use and understand? \_\_\_\_\_ fairly easy to use and understand? \_\_\_\_\_ difficult to use and understand?

Comments: \_\_\_\_\_

6. How would you rate the treatment of the subject matter in this program? \_\_\_\_\_ thorough  
\_\_\_\_\_ adequate \_\_\_\_\_ too brief

7. As a result of using this program, how many of your students do you believe will change certain of their behaviors or attitudes? \_\_\_\_\_ more than half \_\_\_\_\_ about half \_\_\_\_\_ fewer than half

Comments: \_\_\_\_\_

8. Do you have suggestions for improving this program?

Comments: \_\_\_\_\_

Teacher's Name \_\_\_\_\_

Address \_\_\_\_\_

## Evaluation Form



SEXUALLY  
TRANSMITTED  
DISEASES

Please use the back of this form for additional comments.



# TEACHER INFORMATION

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<b>Objective</b>	AIDS is a communicable disease.
<b>Learner Outcome</b>	Know ways the AIDS virus can and cannot be transmitted.
<b>Comprehensive Health Education Topic(s)</b>	VI Diseases and Disorders
<b>Values Integration</b>	Reasoning: Understanding the consequences associated with AIDS transmission.  Respect for Self: Awareness and concern for one's own health.
<b>Motivating Activity</b>	The teacher will distribute an "AIDS MYTH-FACT SHEET" to students.
<b>Identification</b>	<p>Students will identify the ways that the AIDS virus can be transmitted:</p> <ul style="list-style-type: none"> <li>• sexual intercourse with an infected partner</li> <li>• sharing IV drug needles with an infected user</li> <li>• infected mother to unborn baby</li> <li>• transfusion of infected blood or blood fractions</li> </ul> <p>Students will identify ways in which the AIDS virus cannot be transmitted:</p> <ul style="list-style-type: none"> <li>• sneezing</li> <li>• using toilets</li> <li>• using swimming pools</li> <li>• eating in restaurants</li> <li>• donating blood</li> <li>• being in the same class as someone with AIDS</li> </ul>
<b>Effective Communication</b>	Students will discuss each item on the "AIDS MYTH-FACT SHEET," correcting misstatements as they review the sheet.
<b>Decision Making</b>	Students will reorganize the "AIDS MYTH-FACT SHEET" to provide statements about how the AIDS virus is transmitted.
<b>Positive Health Behaviors</b>	<p>Students will demonstrate an understanding of how the AIDS virus is transmitted.</p> <p>Students will recognize ways that the AIDS virus cannot be transmitted.</p> <p>Students will carry out their everyday activities with increased confidence.</p>



## **AIDS MYTH-FACT SHEET FOR LESSON #29**

**(grades 9-12)**

In front of each statement that is true, put a T, and for each statement that is false, put an F.

1. Due to the ways the AIDS virus is transmitted, it is unlikely that AIDS can be transmitted by sitting next to someone in class.
2. Abstinence from sexual intercourse is the surest way to prevent transmission of AIDS virus.
3. People can look and feel healthy and still transmit the AIDS virus.
4. People who shoot drugs and share their needles can get the AIDS virus.
5. There is a vaccine to prevent AIDS.
6. Women cannot transmit the AIDS virus.
7. Everyone who engages in sexual intercourse can be at risk for AIDS.
8. Everyone infected with the AIDS virus has developed AIDS.
9. A person can get AIDS from giving blood.
10. AIDS, itself, usually does not kill a person.
11. Most children with AIDS got it from an infected mother.
12. A person who is concerned can be tested for the AIDS virus.
13. There is both a national and a State toll-free telephone hotline for AIDS information.

## **Answers to AIDS MYTH-FACT SHEET #29**

1. True
2. True
3. True
4. True
5. False
6. False
7. True
8. False
9. False
10. True
11. True
12. True
13. True

The U.S. Public Health Service 24-hour AIDS national hotline phone number is 1-800-342-AIDS. The South Dakota State Hotline is 1-800-592-1861

# TEACHER INFORMATION

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## PREPARATION OF THE GAME - "AIDS Concentration"

1. Using the "AIDS Concentration Game Card Master", duplicate on cover stock the number of sets of cards equal to the number of groups of students in your classroom. Cut the cards apart, keeping them in individual sets for each group of students.

Number the reverse side of each set of cards from 1 to 30.

Note: This activity is modeled after the game "Concentration".

AIDS Concentration Game Card Master

AGENT	HUMAN IMMUNODEFICIENCY VIRUS (HIV)
RESERVOIR	HUMAN IMMUNE SYSTEM
RESERVOIR	ASYMPTOMATIC CARRIER
PLACE OF EXIT	PENIS
PLACE OF EXIT	VAGINA



AIDS Concentration Game Card Master

PLACE OF EXIT	CONTAMINATED BLOOD
METHOD OF TRANSMISSION	UNPROTECTED SEXUAL INTERCOURSE
METHOD OF TRANSMISSION	SHARING NEEDLES
METHOD OF TRANSMISSION	INFECTED PREGNANT WOMEN TO UNBORN CHILD
METHOD OF TRANSMISSION	CONTAMINATED BLOOD PRODUCTS

AIDS Concentration Game Card Master

PLACE OF ENTRY	ANUS
PLACE OF ENTRY	PENIS
PLACE OF ENTRY	VAGINA
PLACE OF ENTRY	BLOOD
SUSCEPTIBLE HOST	ANYONE ENGAGING IN RISK BEHAVIORS

"Game - AIDS Concentration"

<u>Chain Links</u>	<u>AIDS Characteristics</u>
Agent	HIV
Reservoir	asymptomatic carriers
Reservoir	human immune system
Place of Exit	contaminated blood
Place of Exit	penis
Place of Exit	vagina
Method of Transmission	unprotected intercourse
Method of Transmission	sharing needles
Method of Transmission	infected pregnant women to unborn child
Method of Transmission	contaminated blood
Place of Entry	penis
Place of Entry	vagina
Place of Entry	anus
Place of Entry	blood
Susceptible Host	anyone engaging in risk behaviors



# TEACHER INFORMATION

AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 9-12

## OBJECTIVE:

The learner will demonstrate the ability to comprehend the high and low risk behaviors that spread HIV.

## MATERIALS:

Transparencies on Body Fluids, HIV Transmission and Risk Factors, Pages Merrill Student Text, Pages 10-13  
Student Worksheet, Page

## VOCABULARY:

Abstinence, monogamy, masturbation, condom, hemophilic, semen, vaginal/cervical secretions, amniotic fluid, fetus

## PROCEDURES:

1. Conduct the STD Shuffle.
2. Tell the students that the purpose of this lesson is to learn about how HIV is spread. Emphasize to students that AIDS is a disease of risk behaviors. Transmission of the virus is due to risk behaviors people take as demonstrated in the STD Shuffle.
3. Assign student reading in the Merrill text, pages 10-13. Direct students to study the risk factors quietly with a partner, with each person verbalizing the information.
4. Use the transparencies on body fluids and transmission to summarize and clarify concepts so that students have a clear understanding of information and are given the opportunity to ask questions.
5. Assign the risk behavior worksheet. Students can work in small groups or individually.
6. As a class, debrief the results of the activity. Students should be able to conclude that high risks apply to all individuals. Provide a follow-up discussion on the concept that behaviors, not groups, are responsible for HIV transmission.

## EVALUATION:

Completion of the student worksheet and participation in discussion are two suggested methods of evaluation.

AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 9-12

## STD SHUFFLE

An individual cannot tell whether it is safe to have sex with or to share needles with another person by looking for signs of illness or by asking the other person if he or she is healthy. Most infected persons have no symptoms or outward signs of illness, and most do not know, themselves, that they are infected.

This is an introductory activity that demonstrates how STD's/HIV can spread through a population.

**Preparation:** Index cards for everyone in class

Mark on two index cards in the upper corner A

Mark on one index card in the upper corner M

Mark on one index card in the upper corner C

Mark on one index card in the upper corner +

All of the other index cards are plain.

**Implementing the activity:**

As students come in the room, hand each one an index card being sure that the five marked ones are randomly handed out.

Ask students to have a pencil or pen ready.

When all students are present, instruct them to go around the room and meet 5 people. They write the names of the people on their cards as they meet them. Students are pretending that one person is infected with an STD or HIV.

The meeting of people represents sexual exposure. When each person has met 5 others, have them return to their seats.

Call on the student with the + marked card to stand and read the names on his or her card. That person is designated as infected with a virus such as HIV. Each person stands as their name is read. Ask if any have a letter in the corner of their index card. If they have, then they can sit down. They did not get infected because they practiced the following:



## **HIGH RISK BLOOD SHARING**

HIV is easily transmitted through blood contaminated instruments. Infected blood that carries HIV may be injected into an uninfected person by the sharing of needles, tattoo instruments, or anything else that has the potential to puncture intact skin. Often IV drug users will draw blood from their veins into the needle. Thus, when IV drug users share needles, they also share blood. Over half the women who have contracted AIDS in the United States have acquired their disease by sharing needles in this fashion. Most babies infected with AIDS at birth were delivered by mothers who were IV drug users.

Before 1985, when the HIV antibody test became available, receiving transfusions of blood or blood products was risky. Person's with hemophilia (an inherited blood disorder that delays the clotting of blood) require frequent injections of clotting factor prepared from many hundreds of blood donors to prevent bleeding episodes. Many of these clotting factor preparations were also contaminated with HIV early in the epidemic.

Since the advent of testing, this risk has been largely eliminated. A person that contracted AIDS in the past as a result of receiving a blood transfusion did not contract the disease as a result of a preventable behavior.

## **SEXUAL INTERCOURSE**

Stress that many types of unprotected sexual behaviors are dangerous and may lead to infection with HIV. Contrary to what some people may believe, HIV can be transmitted through sexual intercourse from man to woman and woman to man. Intercourse must be viewed as risky if done outside of a monogamous relationship. If a condom is used, the risk is lessened, but not eliminated.

## **ANAL INTERCOURSE**

Emphasize that anal intercourse is one of the risk behaviors most strongly linked with HIV transmission. This sexual act frequently results in anal tears, which expose blood vessels, making it easy for HIV to enter the bloodstream. Both partners are susceptible to contracting HIV during anal intercourse. However, it is clear that the partner who receives the penis is the one more likely to contract HIV.

## **ORAL-GENITAL INTERCOURSE**

You may choose to introduce the terms fellatio and cunnilingus. Fellatio is the oral stimulation of the penis by a male or female. Cunnilingus is the oral stimulation of the vagina or clitoris by a male or a female. Fellatio is more likely to result in the transmission of HIV from an infected partner than cunnilingus. This is because semen contains more HIV than do vaginal secretions. However, HIV infection can result from either fellatio or cunnilingus.

**A = ABSTINENCE**

**M = MONOGAMY**

**C = CONDOM**

The students who are still standing from the original five then read out their cards and all those people stand. Again anyone that has a A, M, or C can sit down as they are not infected. You continue until everyone has read their card or everyone who does not have a marked card is standing.

This quickly demonstrates how HIV or any STD can spread through the population.

## **HOW HIV IS SPREAD**

Since HIV is found in blood, semen, and vaginal/cervical secretions of infected persons, it follows that AIDS is spread by behaviors that involve the exchange of these fluids between infected and uninfected persons.

The most common way that the HIV is transmitted is by sexual intercourse. HIV can be transmitted sexually from man to man, man to woman, and woman to man. The second most common way that HIV is transmitted is by the sharing of IV drug needles or syringes that have become contaminated with blood of a user who is infected. A third way that HIV can be transmitted is through the blood of an infected mother to her fetus or newborn. In the past, people who received blood transfusions or blood products occasionally developed AIDS because the person who donated the blood was infected with HIV. Since 1985, all blood donated in this country has been screened for HIV infection. Blood that is found to be infected is discarded and is not transfused.

Initial publicity about AIDS emphasized the populations that were most affected. Today, AIDS is best thought of as a disease of risk behaviors rather than of types of people. While the majority of people who contracted AIDS previously were homosexual males and intravenous drug users, the incidence of AIDS is now increasing among heterosexuals and those who do not use intravenous drugs.

Through engaging in risk behaviors, anyone, whether heterosexual, homosexual, or bisexual can get AIDS. In many parts of central Africa, AIDS is present in a large segment of the entire population and cases in women are as common as in men.



## **LOW RISK**

There have been no documented cases of HIV transmission from saliva, tears, amniotic fluid, feces, or urine. These fluids are considered low risk because it is possible, although unlikely, that they contain HIV, (one HIV positive person's saliva out of 71 infected persons studied showed presence of HIV). Because there is a chance of human immunodeficiency virus transmission in these fluids, we consider exposure to these fluids to be low risk. Consequently, people should limit exposure to saliva as in deep or French kissing, however, this is not as critical as avoiding exposure to blood, semen, or vaginal/cervical secretions.

## **EXPLANATION OF RISK FACTORS - TRANSMISSION**

The numbers on the transparency for risk factors of persons with AIDS are 5-10 years behind those for HIV infection today because of the incubation period between infection and development of symptoms. These figures, however, provide the best information on behaviors that have caused individuals in the past to become infected with HIV.



(Note) This material needed for Goal 1, Graues 9-12, The STD Shuffle

Laboratory workers also have not been at an additional risk when they follow safety procedures when handling blood and tissue samples of AIDS patients. However, all health care and laboratory workers must be careful to avoid being accidentally stuck with needles or other sharp objects used in the care of AIDS patients.

The AIDS virus has been found in body fluids and secretions such as blood, semen, tears, sweat, saliva, vaginal secretions, feces, urine, and breast milk. However, the virus has been found to be transmitted through blood, semen, vaginal secretions, feces, and urine. This does not mean that the AIDS virus will not be transmitted in any of the other body fluids. For example, the AIDS virus, which may exist in small amounts in saliva, could possibly be transmitted by open-mouth kissing. Thus, open-mouth kissing is considered to be a potential risk behavior in the transmission of the AIDS virus. The AIDS virus can be spread from male to male, male to female, female to male, or female to female.

The AIDS virus may be transmitted in blood, semen, vaginal secretions, urine, and feces

## How The AIDS Virus Is Transmitted

Regardless of the method, whenever there is an exchange of body fluids, transmission of the AIDS virus is possible. The AIDS virus is known to be transmitted by the following means.

- sexual contact
- sharing blood-contaminated needles
- transfusion of infected blood or blood products
- during pregnancy from an infected woman to her fetus

To become infected with the AIDS virus, body fluids must be exchanged between an infected person and an uninfected person

## RISK BEHAVIORS

There are risk behaviors in connection with these means of transmitting the virus that you must consider. It is important to understand that a person who is infected with the AIDS virus may not have the disease AIDS. Yet, an infected person, having no signs and symptoms, may infect others by engaging in the following risk behaviors.

A person infected with the AIDS virus who has no symptoms of the disease may infect others



### Risk Behavior

Sexual Intercourse with an Infected Partner

Sexual intercourse is the insertion of an erect penis into the vagina. During sexual intercourse, the virus can enter the bloodstream of the uninfected partner

Suppose a female has sexual intercourse with an infected male. After the male ejaculates, or releases semen, the AIDS virus in the semen is deposited in the vagina. If there are any tears in the vaginal linings or in other areas near the vagina, such as the cervix, tiny blood vessels will be exposed. The infected semen may enter the female's bloodstream through these blood vessels and thus infect her with the AIDS virus.

Suppose a male has sexual intercourse with an infected female. The female will have vaginal secretions that contain the AIDS virus. The virus can enter the male's bloodstream if he has any tears in the skin of the penis. Thus, the male can become infected with the AIDS virus.



### Risk Behavior

Anal Intercourse with an Infected Partner

Anal intercourse is the placing of an erect penis into the anus of a partner. This sex act can promote the transmission of the AIDS virus. Rectal tissue is easily torn during anal intercourse. This exposes tiny blood vessels. Upon ejaculation, semen from an infected partner can enter the bloodstream through the tears in the anus of the other partner.

Because the AIDS virus is in the body fluids and mucous membranes of infected persons, it is also possible to transmit the virus from fluids in the anus of one partner to the penis of the other partner. If there is a break in the skin of the penis, the virus in the mucous membranes of the anus may enter the bloodstream.

The AIDS virus can be transmitted during anal intercourse

The AIDS virus is in the body fluids and mucous membranes of infected persons



### Risk Behavior

Oral-Genital Intercourse with an Infected Partner

Oral-genital intercourse is the stimulation of the genitals by the partner's mouth. If there are tears in the penis or vagina, the AIDS virus present in the saliva of an infected partner may enter the bloodstream of the other partner. If there are tears in the mouth or gums of either partner, semen or vaginal fluids containing the virus may enter the bloodstream through the tears in the one partner's mouth tissue.

The AIDS virus can be transmitted during oral-genital intercourse



### Risk Behavior

Open-Mouth Kissing with an Infected Partner

It is possible for the AIDS virus to be transmitted through open-mouth kissing if (1) one partner is infected with the AIDS virus and (2) the other partner has cuts or sores in the mouth. The AIDS virus may enter the cuts or sores and enter the bloodstream.

The AIDS virus may be transmitted during open-mouth kissing between an infected person and an uninfected person who has mouth or gum sores



### Risk Behavior

**Sexual Contact with Multiple Sex Partners or with Someone Who Has Had Multiple Sex Partners**

The greater the number of sex partners someone has or has had, the more likely that person is to eventually have sexual contact with someone who is infected with the AIDS virus. It is possible to become infected with the AIDS virus through only one sexual contact. Another person who has sexual contact with that person may become infected with the AIDS virus. Having sexual contact with someone who has had multiple sex partners greatly increases the risk of becoming infected with the AIDS virus.

Persons with multiple sex partners increase the likelihood of infecting themselves and others with the AIDS virus



### Risk Behavior

**Sexual Contact with Prostitutes**

Male and female prostitutes and persons having sexual relations with prostitutes are at special risk of becoming infected with the AIDS virus. Prostitutes frequently engage in sexual intercourse, anal intercourse, and oral-genital intercourse with many partners. This increases the likelihood that they will engage in sexual acts with someone who is infected with the AIDS virus and then will spread it to others. In addition, a high percentage of prostitutes are also intravenous drug users. They may become infected with the AIDS virus during sexual acts and spread the AIDS virus during intravenous drug use.

Prostitutes engage in known risk behaviors that increase the likelihood of their infecting themselves and others with the AIDS virus



### Risk Behavior

**Sharing Blood-Contaminated Needles During Intravenous Drug Use**

Intravenous drug users are persons who inject drugs into their veins. AIDS is spread among intravenous drug users when one person uses another's needles to inject drugs. Suppose a person is infected with the AIDS virus and uses a needle. A small amount of this person's blood containing the AIDS virus may be left on the needle. The needle is then shared with another drug user. The AIDS virus is then injected with the drug into the second person's bloodstream. This person is now infected with the AIDS virus. The needle may be shared again and again spreading the virus to several persons. A person who becomes infected through intravenous drug use can also spread AIDS through sexual contact.

Blood containing the AIDS virus may be transmitted when persons share a needle for intravenous drug use.



### Risk Behavior

**Transfusion with Infected Blood or Blood Products**

A blood transfusion is the injecting of blood, such as during an operation, into another person. Sometimes, people give blood and have it stored in case they themselves may need a transfusion later. By doing this, they ensure getting their own blood in the transfusion process. However, in most cases, the recipient of a blood transfusion receives blood from another person. Before March 1985, it was possible that persons receiving blood transfusions could become infected with AIDS. These persons received blood that may have been collected from a person infected with the AIDS virus.

Since March 1985, donated blood has been tested for the AIDS virus

Persons who engage in risk behaviors should not donate blood



### Risk Behavior

**Pregnancy of an Infected Woman**

AIDS has been diagnosed in babies born to women who have AIDS or who have been infected with the virus. These babies do not gain weight normally, are pale and weak, and have difficulty breathing because of severe lung infections. Babies born with AIDS usually die within two years.

If a woman is infected with the AIDS virus and becomes pregnant, she is more likely to develop AIDS. She may pass the AIDS virus to her fetus whether or not she develops the disease. The AIDS virus can pass from the mother's blood to the fetus across the placenta. Approximately one third of the babies born to women infected with the AIDS virus are infected with AIDS and die. Most of the mothers of these babies were intravenous drug users or were married to intravenous drug users. Some of these women had partners who were involved in high-risk sexual behaviors with others.

The AIDS virus can be transmitted from the blood of an infected woman to her fetus during pregnancy



### Review and Reflect

3. How might a laboratory worker contract AIDS?
4. Why is intravenous drug use a known risk behavior for the transmission of the AIDS virus?
5. Why is sexual contact with prostitutes a risk behavior?



**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 9-12**

**RISK BEHAVIOR ANALYSIS**

**NAME**

**Group Members**

**Directions:** Listed below are high risk behaviors. Check or mark each individual that could become infected by participating in that particular high risk behavior. There can be more than one check mark for each behavior.

**HIGH RISK BEHAVIOR**

**HETERO- HOMO- BI- IV DRUG  
SEXUAL SEXUAL SEXUAL USER**

**Sexual Intercourse with an  
Infected Partner**

**Anal Intercourse with an  
Infected Partner**

**Oral-Genital Intercourse with an  
Infected Partner**

**Sexual Contact with Multiple Sex  
Partners or with Someone Who Has Had  
Multiple Sex Partners**

**Sexual Contact with Prostitutes**

**Sharing Blood-Contaminated Sharp  
Instruments (Needles during IV drug  
use, earpiercing, tattoo needles)**

**Based on the results of this activity, what is your conclusion about HIV  
transmission:**

## TEACHER'S KEY

### AIDS: THE PREVENTABLE EPIDEMIC GRADES 9-12

#### RISK BEHAVIOR ANALYSIS

NAME

Group Members

Directions: Listed below are high risk behaviors. Check or mark each individual that could become infected by participating in that particular high risk behavior. There can be more than one check mark for each behavior.

#### HIGH RISK BEHAVIOR

HETERO- HOMO- BI- IV DRUG  
SEXUAL SEXUAL SEXUAL USER

Sexual Intercourse with an  
Infected Partner

Anal Intercourse with an  
Infected Partner

Oral-Genital Intercourse with an  
Infected Partner

Sexual Contact with Multiple Sex  
Partners or with Someone Who Has Had  
Multiple Sex Partners

Student responses will  
vary.

Sexual Contact with Prostitutes

Sharing Blood-Contaminated Sharp  
Instruments (Needles during IV drug  
use, earpiercing, tattoo needles)

Based on the results of this activity, what is your conclusion about HIV  
transmission:

Behaviors, not groups put one at risk for HIV infection and AIDS.



# The Body's Defenses

**Skin** - first line of defense; when unbroken it acts as a barrier

**Mucous membranes** - protective linings of body openings

**Mucus** - sticky protective coating produced by mucous membranes; traps pathogens

**Cilia** - hairlike projections in the nose and throat; trap pathogens

**Tears** - protect eyes by continually washing them and keeping pathogens from entering the eyes

**Stomach acids** - destroy pathogens ingested with foods

**White blood cells** - surround and destroy pathogens

**Antibodies** - protein substances produced in blood that destroy pathogens



**AIDS VIRUS**



**HELPER-T CELL**

# Low Risk Body Fluids



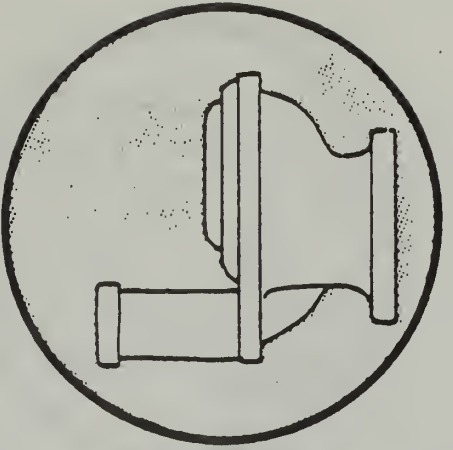
**SALIVA**



**TEARS**



**AMNIOTIC  
FLUID**



**FECES  
URINE**

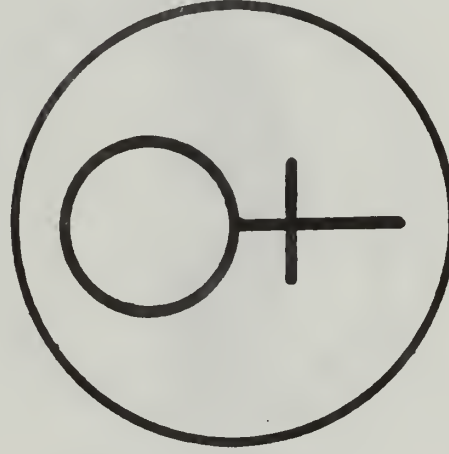
# High Risk Body Fluids



**SEMEN**



**BLOOD**



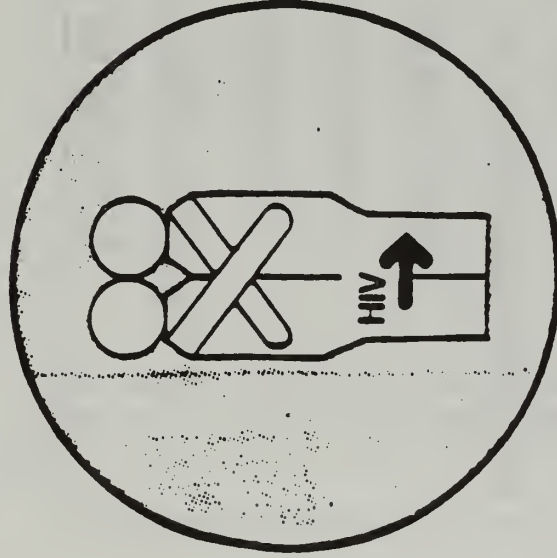
**VAGINAL / CERVICAL  
SECRETIONS**



**BREAST  
MILK**



# HIV is spread by:



**SEXUAL  
CONTACT  
WITH AN  
INFECTED  
PERSON**



**INFECTED  
BLOOD**



**FROM INFECTED  
MOTHER  
TO FETUS/NEWBORN**

# Adult Risk Factors for AIDS

Risk Factor	Male	Female
Homosexual males	71%	—
Homosexual + IV Drug User	8%	—
IV Drug User	14%	49%
Hemophilia	1%	—
Transfusion	1%	11%
Heterosexual cases	2%	30%
Undetermined	2%	10%

Females in U.S. constitute < 7% of all diagnosed cases.



# TEACHER INFORMATION

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## Levels of Infection

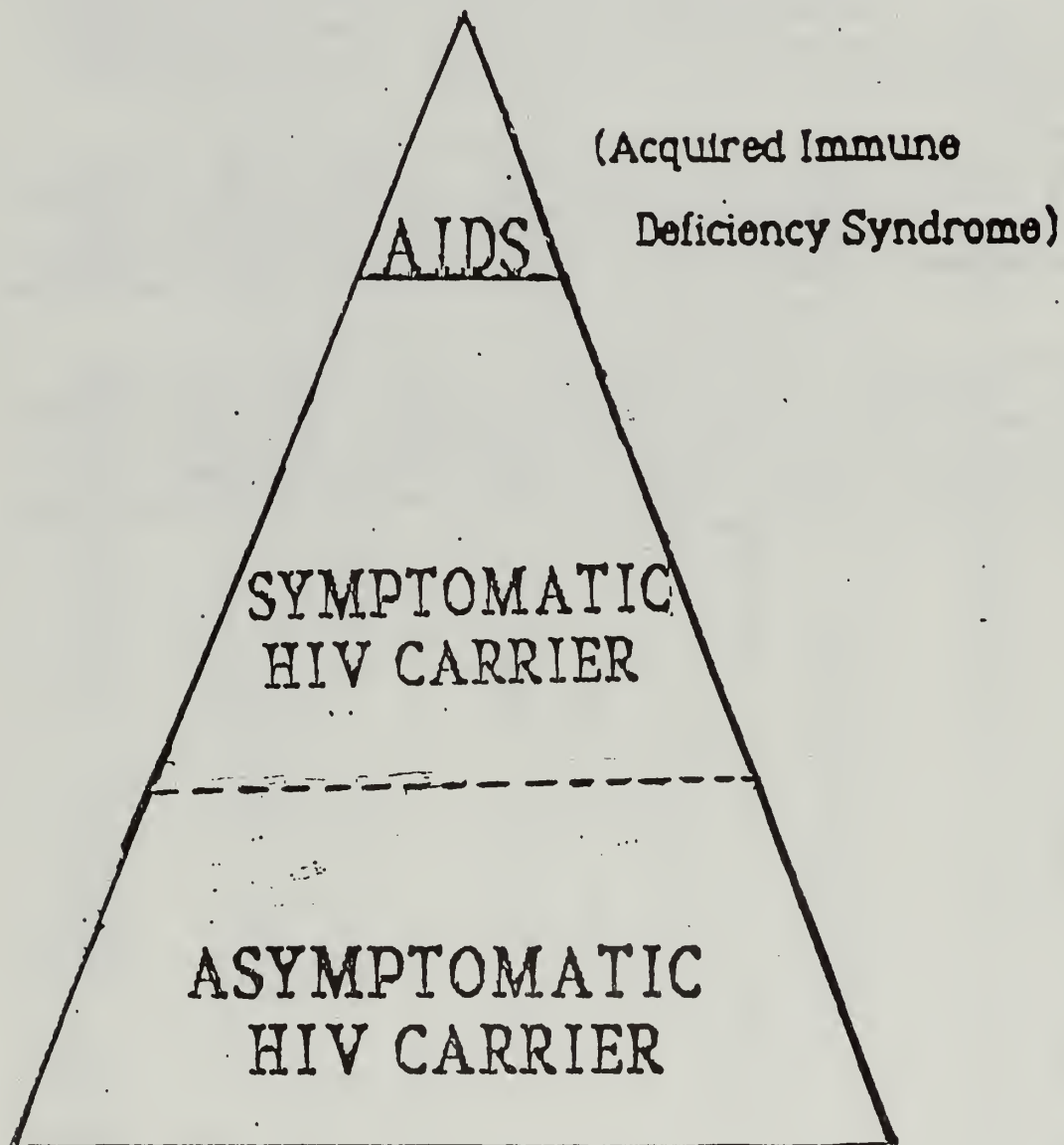
We have talked about 50,000 people diagnosed as having AIDS. It is estimated that as many as 2,000,000 people have been infected with the Human Immunodeficiency Virus (HIV). Persons infected with HIV may have symptoms from none to fatal. The asymptomatic HIV infected person is capable of transmitting the disease to others. At the present time, the majority of these people infected with HIV do not realize that they are infected.

Symptoms may occur any time after infection, from 1 week to over 7 years later. The term ARC, AIDS-related complex, is a term often used to describe symptoms in the HIV infected person that are less severe than those we associate with the disease AIDS. Many of the signs and symptoms of ARC are the same as for other diseases and only a physician can make the diagnosis on the basis of laboratory test results.

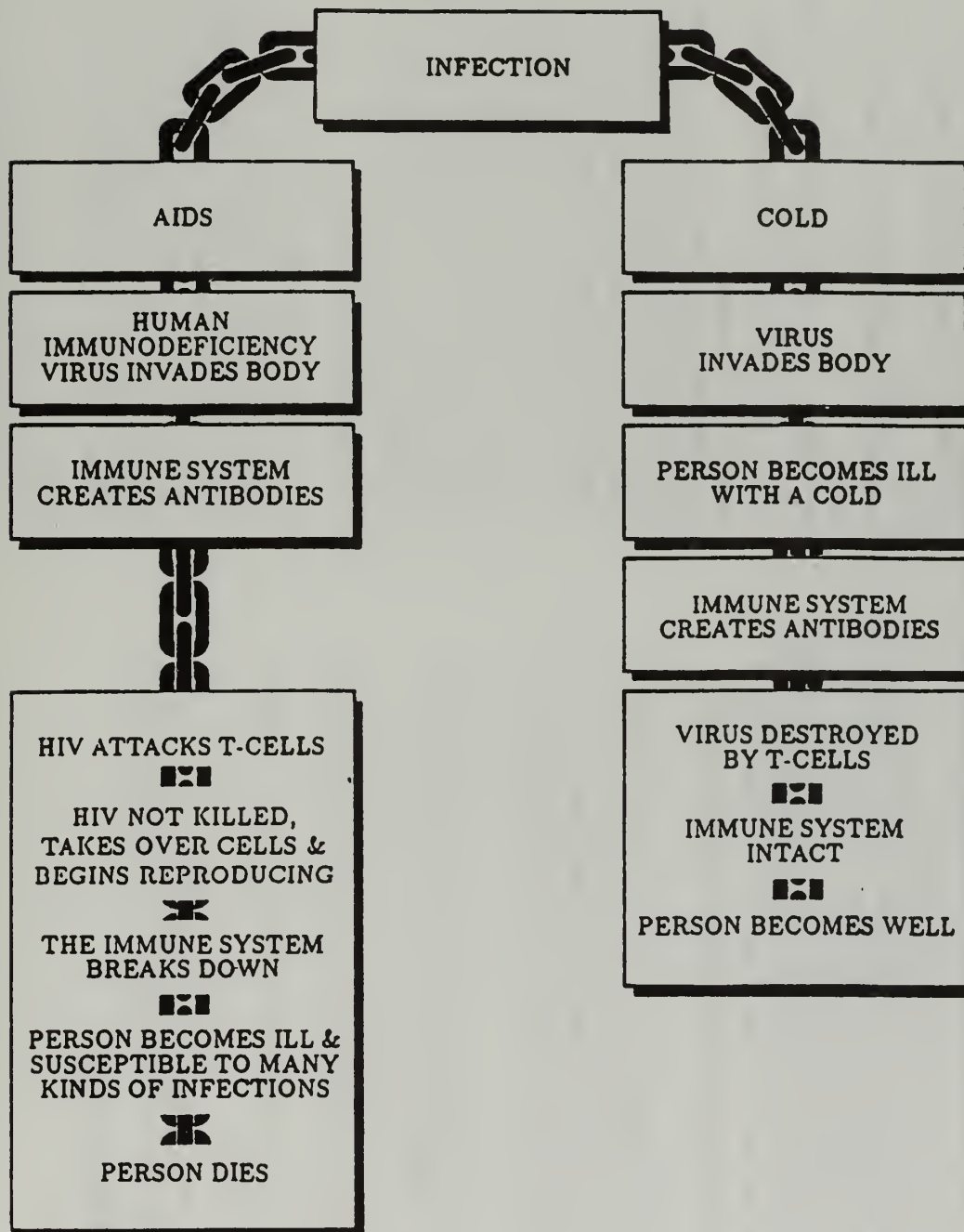
Of all the people infected with HIV at present, only 1-2% have full-blown AIDS. Only a qualified health professional can diagnose AIDS. AIDS destroys the body's immune (defense) system and allows otherwise controllable infections to invade the body and cause additional diseases. These opportunistic diseases would not otherwise gain a foothold in the body. These opportunistic diseases may eventually cause death.

Adapted from the "Surgeon General's Report on Acquired Immune Deficiency Syndrome", U.S. Department of Health and Human Services.  
"AIDS Update", Evelyn Fisher, M.D., Henry Ford Hospital Medical Journal, Vol.35, No.1, 1987

# LEVELS OF INFECTION



# THE IMMUNE SYSTEM





# TEACHER INFORMATION

## AIDS: THE PREVENTABLE EPIDEMIC GRADES 9-12

### TEAM LEARNING STRATEGIES

Cooperative team learning is one strategy to use in presenting information and monitoring comprehension. It is recommended that students of varying abilities work together to accomplish an assigned task.

The process is as follows:

1. Teams are to cooperate in learning the terms and concepts in reading material.
2. Students will work as a group of 4 to find the correct answers to each question on the activity sheet.
3. If members of the group successfully score at a specified level, usually at 80-90% of possible correct, each team member will receive bonus points. (This promotes cooperation and peer assistance as well as positive pressure.)
4. In this particular cooperative team learning activity, students will be given an activity sheet to answer to assist them in learning the concepts from the assigned reading. They will be given time to work on completing the questions and then quizzed on the content at the beginning of tomorrow's lesson. If all team members score \_\_\_\_\_ % on the quiz, all team members receive a bonus of 5 points. There is no competition among groups. The goal is for all students to succeed.

### THE IMMUNE SYSTEM AND HUMAN IMMUNODEFICIENCY VIRUS

The immune system functions to protect the body from infection. It acts both to prevent infection and to reduce the severity of disease when infection occurs. Barriers such as skin and mucous membranes that prevent germs from entering the body are an important part of the immune system. Another major component of the immune system is the white blood cell. White blood cells, which are made in the bone marrow, are microscopic and circulate throughout the body in the blood stream. There are many types of white blood cells. Different types have different functions such as engulfing bacteria or producing poisons to kill parasites.

One type of white blood cell (called a B-lymphocyte) makes antibodies, which are specific molecules that attach to and help kill infecting microorganisms (pathogens) like viruses and bacteria. In general, it is this production of antibodies that results in immunity and the ability to prevent repeated re-infection by the same pathogen.

Another type of white blood cell is the T-lymphocyte. A major function of T-lymphocytes is to control the activity of other white blood cells, and specifically to help activate cells such as B-lymphocytes when an infection is present and to deactivate them when the infection has been controlled.

After HIV enters the body, the virus recognizes and infects a specific T-lymphocyte called the T4 helper lymphocyte. After infecting a T4 lymphocyte, HIV may remain dormant for a variable period of time. For reasons that are not yet known, the virus may then reactivate, begin reproducing, and kill the T4 cell. If sufficient numbers of T4 cells are killed, the infected person's ability to activate the immune system may be diminished or lost and he or she may become increasingly unable to fight off infections. Eventually, the immune system becomes so impaired that even relatively harmless microorganisms that exist normally in the human body are able to cause life-threatening illnesses.

### SYMPTOMS OF AIDS AND ARC

The symptoms of AIDS and ARC develop as HIV progressively kills white blood cells and the immune system becomes unable to fight off infections and other illnesses. The difference between AIDS and ARC is primarily one of severity of immune system dysfunction. A person is given a diagnosis of ARC when they develop illnesses that indicate that their immune system is not functioning properly. Persons with ARC may be quite sick and may die without ever developing AIDS. A patient is given a diagnosis of AIDS when their immune system has become so affected that they develop one of several specific conditions that indicate critical immune system impairment. Most commonly, these specific conditions are infections caused by bacteria or other microorganisms that normally live in the body but are unable to cause illness when the immune system is working normally. These organisms take advantage of a special circumstance or opportunity to cause disease, and thus the infections they cause are often called "opportunistic" infections. In persons with AIDS, these infections are usually life-threatening.

Persons with AIDS or ARC may experience one or more of the following:

Unexplained swollen glands (enlarged lymph nodes) lasting two months or longer.

Persistent fever, chills, and night sweats that recur and last several weeks to months.

Weight loss that exceeds ten pounds not caused by diet or exercise changes.

Unexplained and persistent fatigue.

Persistent diarrhea.



Persistent dry cough and shortness of breath.

Persistent infection.

White spots in the mouth.

Reddish-purple blotches on the skin, inside the mouth, nose, eyelids, and rectum.

An important point to emphasize is that these symptoms may also be caused by many other, less serious illnesses. No one who has these symptoms should assume that they have ARC or AIDS without seeing a doctor to be checked for these other, less serious, and usually curable causes.

#### SPECTRUM OF DISEASE CAUSED BY HIV - "Iceberg Phenomenon"

An iceberg concept can be used to help explain the types of illness caused by HIV. It is best to discuss the AIDS cases first as the "tip of the iceberg." AIDS cases represent a small minority of the infected population. Next is ARC, which currently affects five to ten times as many persons as AIDS. Finally, there is the large percentage of persons, "under the water," who are HIV positive, and asymptomatic carriers. As the epidemic progresses, carriers and persons with ARC may progress to AIDS and recently infected persons will take their place. At least one quarter to a half of the people infected with HIV will develop AIDS within 5-10 years after becoming infected. If current trends continue, by the end of 1991, 270,000 people will have developed AIDS in the U.S. and 179,000 will have died.

#### IMPLICATIONS OF THE LARGEST INFECTED POPULATION BEING ASYMPTOMATIC CARRIERS

1. Since most HIV infected persons do not have symptoms but are still infectious to others, they may be unknowingly and silently spreading this epidemic to others.
2. The number of AIDS cases today is only a fraction of what will occur in the future. The health care system will be faced with providing space, medication, and other services for a large chronically ill population. Increased social services such as medicare and social security will be needed to pay for these services.

#### ORIGINS OF THE AIDS EPIDEMIC

No one knows for certain where or how the AIDS epidemic began. It is known that some people in Africa were infected several decades ago. (This is known because blood specimens collected then, stored frozen, and tested recently, have shown evidence of the infection.) It is possible that the virus infected humans in Africa for many years before this first known proof of infection.

Some scientists believe HIV may have entered the human population from monkeys that contain a similar virus. This could have happened if an infected monkey bit a person or if a person was somehow accidentally exposed to an infected monkey's blood, for example while skinning it in preparation for cooking.

AIDS was first recognized in the U.S. in 1981. It is now realized, however, from testing of stored blood specimens, that some people in the U.S. were infected as early as the mid-1970's.

#### THE HIV ANTIBODY TEST

When HIV infects a person, antibodies to fight the infection are produced, usually within 4-12 weeks. Unfortunately, unlike most other antibodies, the antibodies against HIV are usually not effective in helping the body destroy the virus. This is at least partly because the virus can escape from antibodies by hiding inside the T4 lymphocyte.

Antibodies against HIV will persist indefinitely in the blood of persons who have been infected and can be detected by several different types of blood tests. These tests are called HIV antibody tests. A positive test means that antibodies are present and indicates that the person has been infected at some time in the past with HIV. HIV antibody tests do not indicate whether a person has or will develop ARC or AIDS.

Sometimes the tests used to determine if a person is infected with HIV are not conclusive. A test result may be falsely negative or falsely positive.

A false negative test incorrectly shows that a person has not been infected with HIV when he or she actually has been. For example, a person who has recently been infected may test negative because antibodies have not yet been produced. This person may believe that he or she is not infected with HIV. Yet, this person may be able to infect his or her partner.

A false positive test incorrectly shows that a person has been exposed to HIV when he or she actually has not. Persons who have not engaged in high risk behaviors usually test negative for HIV antibody. In the rare event that such an individual does test positive, there is a real chance the result may be inaccurate. It is for this reason that HIV antibody testing low-risk persons is not recommended.

Persons who have engaged in high risk behaviors (male homosexual contact, IV drug use) may benefit from HIV antibody testing, and certainly need to be counseled about HIV. Counseling and testing services are available free of charge from local county health departments in Oregon. Parental consent or knowledge is not required, and a person may be counseled anonymously. If someone is worried about going to his or her local health department, he or she can go to a health department in another county and receive the same services. An advance appointment is usually required, but there is no fee. You should not consider testing unless you believe you may have been exposed to a HIV during sexual contact or drug use.



**AIDS: THE PREVENTABLE EPIDEMIC  
GRADES 9-12**

**STUDENT ACTIVITY SHEET**

**NAME \_\_\_\_\_**  
**GROUP MEMBERS \_\_\_\_\_**

**Directions:** Work with your group to re-read the assigned pages and determine the correct answers for the following questions. Cooperate within your group to answer the questions and to learn the material. If the team scores above \_\_\_\_\_%, you will each receive bonus points.

1. AIDS, or acquired immunodeficiency syndrome is a \_\_\_\_\_  
caused by a \_\_\_\_\_.
2. The effect of this virus on the body is \_\_\_\_\_.
3. A healthy immune system enables the body to \_\_\_\_\_.
4. A virus is \_\_\_\_\_.
5. Define pathogen \_\_\_\_\_.
6. Describe why HIV is difficult to control \_\_\_\_\_.
7. Describe the cycle of HIV on the body \_\_\_\_\_.

Student Activity Sheet  
cont....

8. Interpret the graph to determine approximately how many cases of AIDS were recorded or projected in the United States in each of the following years:

1985:

1989:

1990:

What conclusion can you make from this information?

9. Why has the attitude now changed to the idea that "AIDS does not discriminate?"
10. A diagnosis of AIDS depends on
11. Explain why a person can be infected with HIV and not know it or not have symptoms
12. Explain what the HIV antibody test shows
13. Define ARC, or AIDS-related complex
14. Describe the short-term and long-term effects of AIDS

Short-term

Long-term

## **TEACHER'S KEY**

### **AIDS: THE PREVENTABLE EPIDEMIC GRADES 9-12**

#### **STUDENT ACTIVITY SHEET**

**NAME**

**GROUP MEMBERS**

**Directions:** Work with your group to re-read the assigned pages and determine the correct answers for the following questions. Cooperate within your group to answer the questions and to learn the material. If everyone scores above \_\_\_\_\_%, you will each receive bonus points.

1. AIDS, or acquired immunodeficiency syndrome is a communicable disease caused by a virus.

2. The effect of this virus on the body is

a breakdown of the body's immune system. The virus destroys infection fighting cells in the body which may result in opportunistic diseases.

3. A healthy immune system enables the body to defend itself against most pathogens.

4. A virus is

a microscopic organism that can reproduce only inside a living host cell.

5. Define pathogen

A disease-causing organism.

6. Describe why HIV is difficult to control

HIV is not a single isolated virus, but a group of similar and related viruses whose genetic makeup is different. The viruses constantly change in the laboratory setting making it difficult to control and develop effective vaccines.

Student Activity Sheet  
cont....

7. Describe the cycle of HIV on the body

After HIV enters the body, the virus recognizes and infects a specific T-lymphocyte called the T4 helper lymphocyte. After infecting a T4 lymphocyte, HIV may remain dormant for a variable period of time. For reasons that are not yet known, the virus may then reactivate, begin reproducing, and kill the T4 cell. If sufficient numbers of T4 cells are killed, the infected person's ability to activate the immune system may be diminished or lost and he or she may become increasingly unable to fight off infections. Eventually, the immune system becomes so impaired that even relatively harmless micro-organisms that exist normally in the human body are able to cause life-threatening illnesses.

8. Interpret the graph to determine approximately how many cases of AIDS were recorded or projected in the United States in each of the following years:

1985: Approximately 35,000  
1989: Approximately 200,000  
1990: Approximately 250,000

What conclusion can you make from this information?

The number of AIDS cases is steadily growing and will continue to escalate in the near future.

9. Why has the attitude now changed to the idea that "AIDS does not discriminate?"

The attitude has changed because individuals of any race or sex can get AIDS through engaging in high risk behaviors.

10. A diagnosis of AIDS depends on

the symptoms of opportunistic diseases and the loss of immunity.

11. Explain why a person can be infected with HIV and not know it or not have symptoms

A person might not know they are HIV positive because they don't consider his or her behaviors to be high risk, don't exhibit symptoms and feel healthy. Symptoms usually do not appear in a person until 5-7 years after infection.

**Student Activity Sheet**  
**cont....**

12. Explain what the HIV antibody test shows

**The HIV antibody test detects the presence of HIV antibodies.**

13. Define ARC, or AIDS-related complex

**ARC is a condition caused by HIV where the individual has early signs and symptoms of AIDS. Symptoms can include diarrhea, fatigue, lymphadenopathy and fever.**

14. Describe the short-term and long-term effects of AIDS

**Short-term**

**Students will provide a variety of answers based on medical and social implications.**

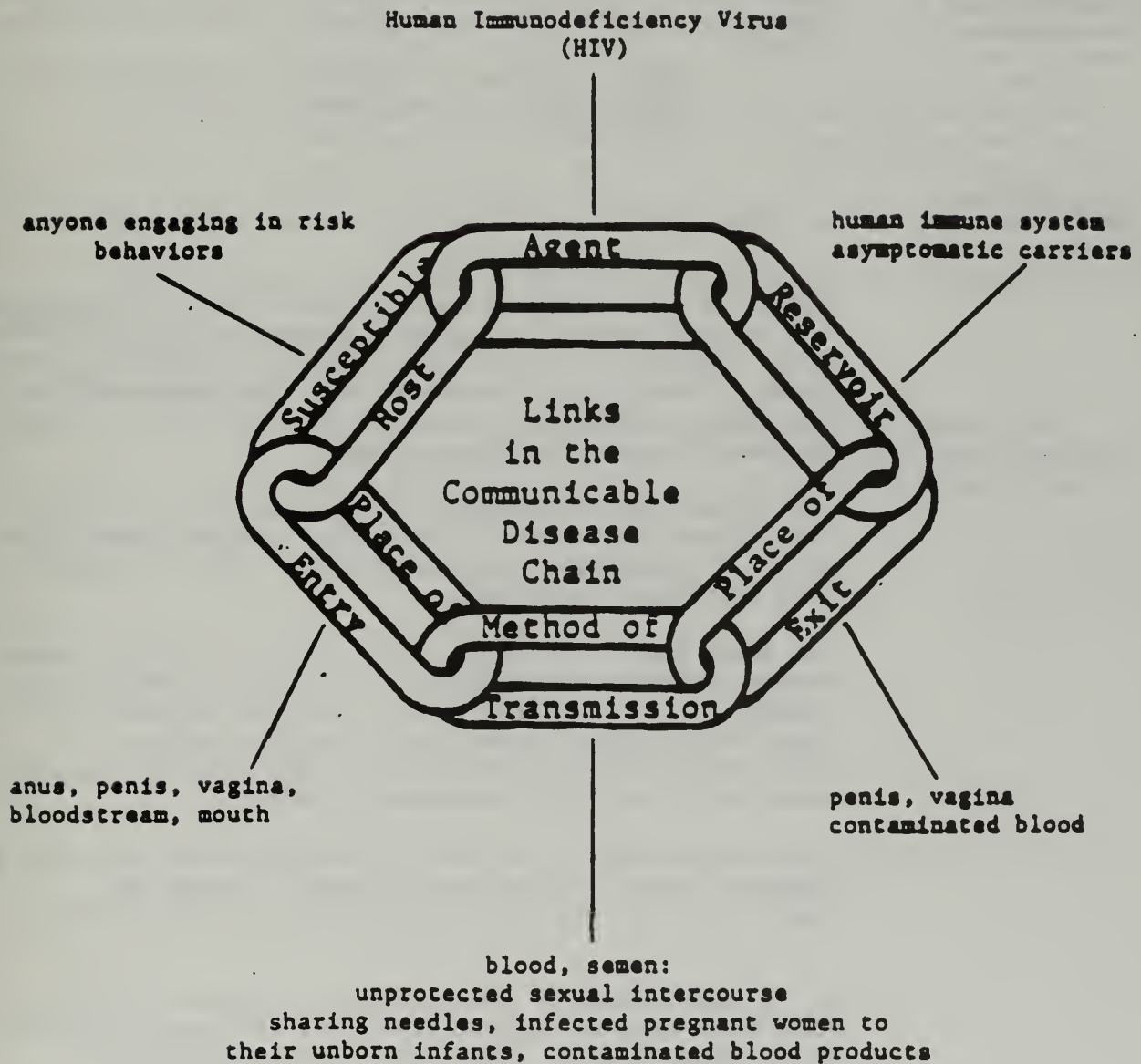
**Long-term**

**Students will provide a variety of answers based on medical and social implications.**

- A** — **Acquired**, *from someone else.*
- I** — **Immune**, *the body's defense system.*
- D** — **Deficiency**, *decreased defense.*
- S** — **Syndrome**, *a set of clinical and laboratory results.*



## AIDS and the COMMUNICABLE DISEASE CHAIN



# TEACHER INFORMATION

## COMMUNICABLE DISEASE CHAIN

### AIDS NARRATIVE

#### Agent

Human Immunodeficiency Virus (HIV) is known as the virus which causes AIDS. HIV is the most common and appropriate form use. However, there are several names used for this virus:

- HTLV-III - Human T-Lymphotropic Virus Type III
- LAV - Lymphadenopathy Associated Virus
- AIDS virus

#### Reservoir

A. Human Immune System and B. Asymptomatic carrier

A. The immune system is the body's mechanism for defending itself against harmful germs. For most diseases you acquire immunity (the body's resistance to disease) after exposure to a germ (virus, bacteria, fungi or yeast). When a germ enters the body, the immune system produces antibodies. These antibodies attempt to destroy or neutralize the invading organism.

The immune system includes many body organs and tissues. Human blood is also part of the body's immune system which contains different types of white blood cells (T-cells) that help fight infection.

The Human Immunodeficiency Virus attacks a person's immune system through entering specific T-cells and damaging the person's ability to fight other diseases. Without a functioning immune system, the person now becomes vulnerable to becoming infected by opportunistic diseases which may cause life-threatening illness.

Life-threatening illness that ordinarily would never get a foothold cause "opportunistic disease" - using the opportunity of lowered resistance to infect and destroy.

B. A large number of people who are infected with the AIDS virus have no signs or symptoms. This may be as many as 2 million people. This asymptomatic reservoir of infected individuals are capable of spreading the infection through risk behaviors.

Place of

Entry

Anus, Penis, vagina, bloodstream, mouth

Although the HIV is found in several body fluids, a person acquires the virus during sexual contact involving an infected person's blood or semen and possibly vaginal secretions. The virus then enters a person's bloodstream through their rectum, vagina, penis, or mouth. Small (unseen by the naked eye) tears in the surface lining of the vagina or rectum may occur during intercourse thus opening an avenue for entrance of the virus directly into the bloodstream.

Susceptible

Host

Anyone engaging in risk behaviors

The human immunodeficiency virus infects persons who expose themselves to known risk behaviors. Risk behaviors are a matter of individual choice. The epidemic is no longer limited to certain risk groups.

AIDS is everyone's concern.

Place of

Exit

Penis, Vagina, Contaminated Blood

The human immunodeficiency virus is found in several body fluids, (semen, vaginal secretions and blood). During sexual contact an infected person's blood or semen and possibly vaginal secretions exit the body through the penis and vagina. The virus also exits the body through contaminated blood.

- on needles and syringes shared by drug users
- through contaminated blood products
- in blood donated for transfusion
- from pregnant women to unborn child

In March of 1985 a blood screening program was put into place to protect those receiving transfusions from contaminated blood.

Method of

Transmission

Blood, semen, and vaginal secretions

HIV is transmitted by high risk behaviors:

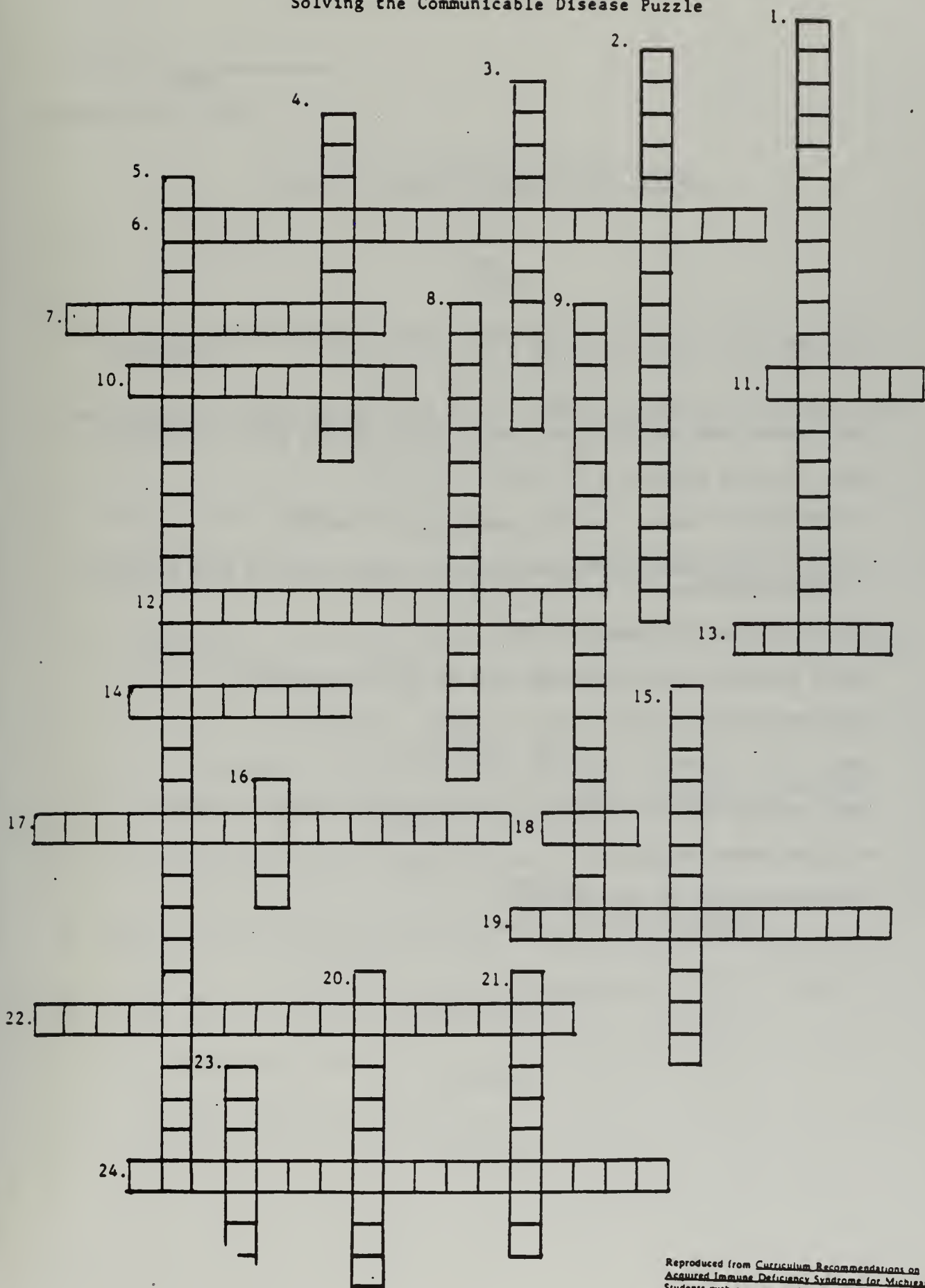
1. Unprotected sexual intercourse (heterosexually or homosexually)
2. By sharing needles and syringes for intravenous drug use.
3. Receiving contaminated blood products
4. HIV positive pregnant women to their unborn infants

HIV is not spread through casual contact - sweat, tears, drinking from the same glass, hugging, etc.

Engaging in risk behaviors or deciding to abstain from risk behaviors are personal choices that will determine if you are a person at risk.

# Solving the Communicable Disease Puzzle

Name \_\_\_\_\_





\_\_\_\_\_  
Name

### Solving the Communicable Disease Puzzle

#### DOWN

1. A disease that a healthy immune system would normally be able to fight. (2 words)
2. A condition caused by the AIDS virus in which a person tests positive and has symptoms only of the first stages of the disease AIDS. (3 words)
3. Where the germ leaves the reservoir. (3 words)
4. To have sent or cause to go from one person to another.
5. A communicable disease that results in a breakdown of the body's ability to fight infection. (4 words)
8. Part of the body's defense system.
9. People infected with the HIV who show no signs of disease.
15. The place where the germ enters the body. (3 words)
16. These letters stand for acquired immune deficiency syndrome.
20. Final test to confirm the presence of antibodies to HIV. (2 words)
21. Any place germs can live.
23. A condition which is not inherited.



Teacher Key (con't)

Solving the Communicable Disease Puzzle

DOWN

1. A disease that a healthy immune system would normally be able to fight.  
(2 words)  
opportunistic disease
2. A condition caused by the AIDS virus in which a person tests positive and has symptoms only of the first stages of the disease AIDS. (3 words)  
AIDS related complex
3. Where the germ leaves the reservoir. (3 words)  
place of exit
4. To have sent or cause to go from one person to another.  
transmitted
5. A communicable disease that results in a breakdown of the body's ability to fight infection. (4 words)  
acquired immune deficiency syndrome
8. Part of the body's defense system.  
white blood cells
9. People infected with the HIV who show no signs of disease. (2 words)  
asymptomatic carriers
15. The place where the germ enters the body. (3 words)  
place of entry
16. These letters stand for acquired immune deficiency syndrome.  
AIDS
20. Final test to confirm the presence of antibodies to HIV. (2 words)  
WESTERN blot
21. Any place germs can live.  
reservoir
23. A condition which is not inherited.  
acquired

Teacher Key (con't)

Solving the Communicable Disease Puzzle

ACROSS

6. A disease that is passed from one person to another. (2 words)  
communicable disease
7. A medicine which kills bacteria.  
antibiotic
10. The time period occurring before and during birth.  
perinatal
11. Sub-microscopic infective agent. Reproduces only in living cells.  
virus
12. Test used to detect antibodies to HIV which is repeated if positive.  
(3 words)  
ELISA blood test
13. The germ which produces an infection.  
agent
14. Fear of AIDS.  
AFRAIDS
17. Behaviors, conditions, environmental and inherited factors which make a person more likely to get a disease. (2 words)  
susceptible host
18. The most widely used name for the AIDS virus. (abbreviation)  
HIV
19. A behavior that threatens your health and increases your chances of becoming ill. (2 words)  
risk behavior
22. The body system which acts to defend the body against attack by organisms that cause infection. (3 words)  
human immune system
24. Sexual contact involving the genitals of at least one partner. (2 words)  
sexual intercourse

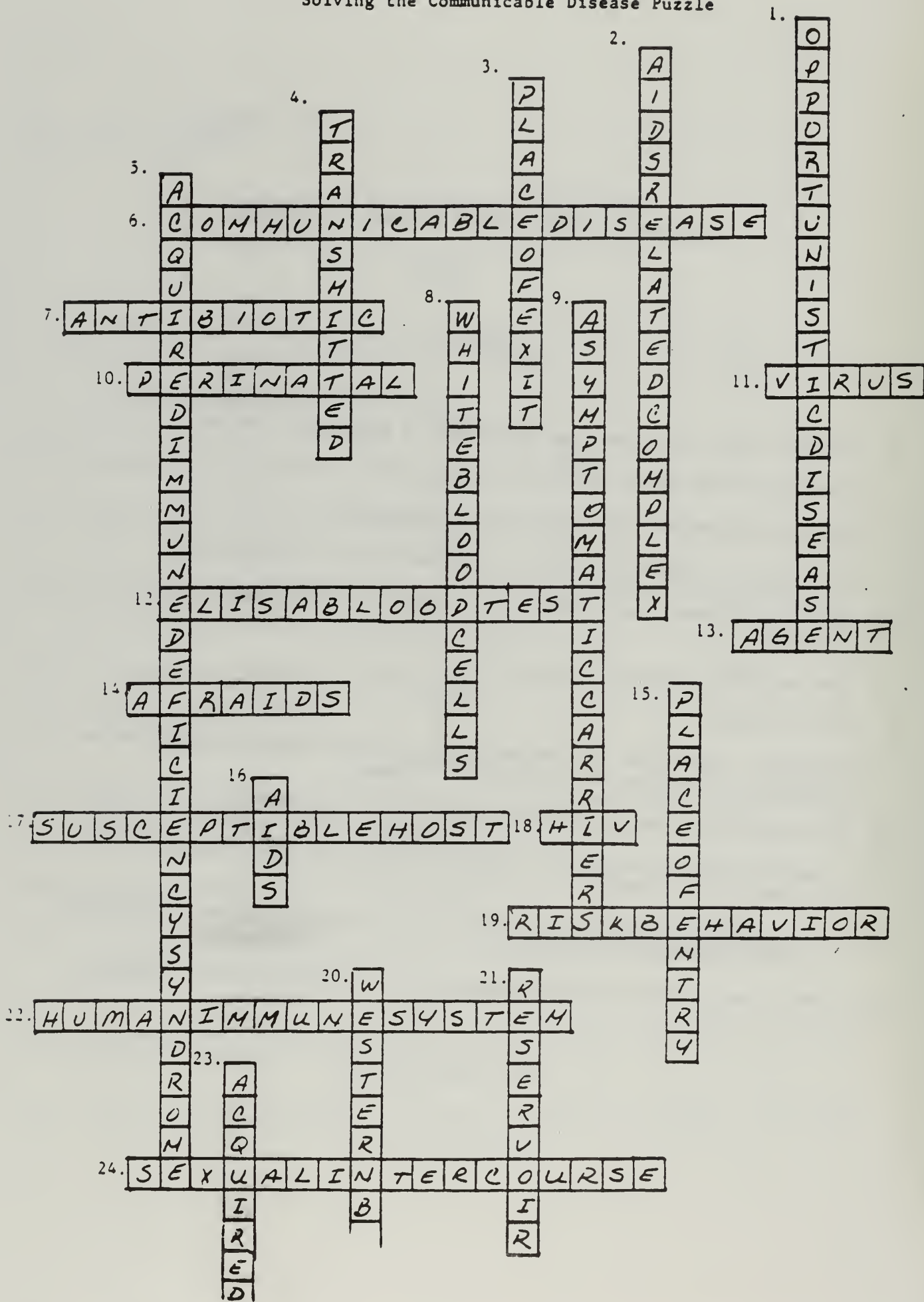
\_\_\_\_\_  
Name

Solving the Communicable Disease Puzzle

ACROSS

6. A disease that is passed from one person to another. (2 words)
7. A medicine which kills bacteria.
10. The time period occurring before and during birth.
11. Sub-microscopic infective agent. Reproduces only in living cells.
12. Test used to detect antibodies to HIV which is repeated if positive.  
(3 words)
13. The germ which produces an infection.
14. Fear of AIDS.
17. Behaviors, conditions, environmental and inherited factors which make a person more likely to get a disease. (2 words)
18. The most widely used name for the AIDS virus. (abbreviation)
19. A behavior that threatens your health and increases your chances of becoming ill. (2 words)
22. The body system which acts to defend the body against attack by organisms that cause infection. (3 words)
24. Sexual contact involving the genitals of at least one partner. (2 words)

# Solving the Communicable Disease Puzzle



## NINTH - TWELFTH GRADE

GOAL II: Identify the methods of preventing, treating, and controlling diseases.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Understand the importance of abstaining from sexual activity until a mutually monogamous relationship is established within the context of marriage.
2. Understand the importance of abstaining from illegal drug use.
3. Identify behaviors that reduce the risk of acquiring HIV infection.
4. Review and practice decision-making skills.

1. Teacher Information pp. 270-271
2. Teacher Information pp. 272-273
3. Teacher Information pp. 274-279
4. Teacher Information pp. 280-281
5. Teacher Information pp. 282-286
6. Students will complete a worksheet demonstrating decision-making skills.  
(Worksheet 9-12A)





# TEACHER INFORMATION

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<b>Objective</b>	There are skills to practice which will lead to a healthful lifestyle.
<b>Learner Outcome</b>	Appreciate the value of delaying sexual activity.
<b>Comprehensive Health Education Topic(s)</b>	V Family Life Education
<b>Values Integration</b>	Reasoning: Understanding the advantages of delaying sexual activity. Respect for Self and Others: Making responsible decisions to abstain. Self-discipline: Delaying sexual activity.

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<b>Motivating Activity</b>	Students will list reasons why young people might get involved in sexual activity, such as: <ul style="list-style-type: none"><li>• sexual attraction</li><li>• societal pressures</li><li>• peer pressure</li><li>• pressure from a partner</li><li>• family situations</li><li>• mistaken beliefs</li><li>• boredom</li><li>• low self-esteem</li><li>• drinking and drugs</li><li>• loneliness</li><li>• influence of soap operas and other media</li></ul>
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<b>Identification</b>	Students will identify those reasons which are personal and those which are societal.
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<b>Effective Communication</b>	Students will identify one reason and discuss how that problem can be dealt with in ways other than sexual activity.
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<b>Decision Making</b>	Students will decide which reasons might relate to themselves.
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<b>Positive Health Behaviors</b>	Students will appreciate the value of delaying sexual activity. Students will appreciate the need to be responsible for their own behavior and for the consequences it may have for themselves and other people.
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**Background** The purpose of this lesson is to explore some of the reasons why adolescents may engage in sexual activity. Students will need to recognize that personal and societal pressures often may make sexual activity look attractive – however, they need to recognize that there are positive behaviors, other than sexual, which can permit personal development and satisfaction.

Sex is not simply a form of stimulation and personal enjoyment, but carries with it both risk and responsibility. Abstinence is a lifestyle that affords greater opportunities for emotional, psychological, and educational growth.

***Advantages of Abstinence***

- free from pregnancy and venereal disease
- free from the bother and dangers of the pill, IUD, and other contraceptives
- free from pressure to marry before you are ready
- free from abortion
- free from the trauma of having to give your baby up for adoption
- free from exploitation by others
- free from guilt, doubt, disappointment, worry, rejection
- free to be in control of your life
- free to focus energy on establishing and realizing life goals
- free to develop a respect for self
- free to develop an unselfish sensitivity
- free to have greater trust in marriage
- free to enjoy being a teenager

**Syllabus Connection** V Family Life Education – appreciating the role of the family in society and preparing each member for the responsibilities of family membership and adulthood, including marriage and parenthood. (pp. 26-27)

**Values Integration** Reasoning/understanding the advantages of delaying sexual activity  
Respect for self and others/making responsible decisions to abstain  
Self-discipline/delaying sexual activity

# TEACHER INFORMATION

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**Objective**      There are methods of prevention for AIDS.

**Learner Outcome**      Understand how abstinence from illegal drug use can prevent the transmission of the AIDS virus.

**Comprehensive Health Education Topic(s)**      VI Diseases and Disorders  
VIII Alcohol, Tobacco, and Other Drug Substances

**Values Integration**      Respect for Self: Avoiding behaviors which put one at risk to exposure to the AIDS virus.  
  
Respect for Others: Avoiding behaviors which can result in the transfer of the AIDS virus to another person.  
  
Self-discipline: Abstaining from illegal drug use despite pressures.

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**Motivating Activity**      Students will write an article for the school newspaper on how abstinence from illegal drug use can prevent the spread of the AIDS virus.

**Identification**      Students will identify drug practices that put a person at risk to be exposed to the AIDS virus.

**Effective Communication**      Students will discuss how drug practices increase the risk of exposure to the AIDS virus, why some people might continue the practices regardless of the AIDS risk, and how such individuals can be helped to change their behavior.

**Decision Making**      Students will decide to:

- make decisions to avoid illegal drug use
- not begin to use illegal drugs

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**Positive Health Behaviors**      Students will practice positive health behaviors to remove themselves from the possibility of exposure to the AIDS virus, such as:

- resisting peer pressure
- abstaining from illegal drug use
- participating in activities that enhance self-esteem and self-worth
- seeking help for problems or concerns

**Teacher Vocabulary**

**Addiction** – Habitual use of a substance (like IV drugs) and inability to stop the craving for such a substance.

**AIDS** – The initials for the disease “Acquired Immune Deficiency Syndrome.” A disease caused by a virus which breaks down the body’s immune system, making it vulnerable to opportunistic infections and cancer.

**HIV** – The Human Immunodeficiency Virus. It causes AIDS by attacking the body’s immune system, making infected people vulnerable to fatal infections, cancer, and neurological disorders.

**Illegal drugs** – Drugs that are not obtained through legal means or for legitimate medical purposes.

**Intravenous drugs** – Drugs that are administered through a needle and syringe and injected directly into a vein and thus the bloodstream.

**Needles and works** – Devices used to prepare and inject drugs directly into the vein and thus into the bloodstream.

**Opportunistic infection** – An infection caused by a microorganism that rarely causes disease in persons with a normal immune system.

**Risk factor** – Activity that makes a person more susceptible or more likely to be exposed to the AIDS virus (HIV).

**Transmission** – The passing of infectious agents from one person to another.

**Syllabus Connections**

**VI Diseases and Disorders** – understanding diseases and disorders and taking actions to prevent or to limit their development. (pp. 28-29)

**VIII Alcohol, Tobacco, and Other Drug Substances** – understanding the factors involved in using drug substances appropriately and preventing abuse. (pp. 32-33)

**Values Integration**

**Respect for self**/avoiding behaviors that put one at risk to exposure to the AIDS virus

**Respect for others**/avoiding behaviors which can result in the transfer of the AIDS virus to another person

**Self-discipline**/abstaining from illegal drug use despite pressures



# TEACHER INFORMATION

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## **Background**

This activity provides students with opportunities to practice skills in saying no in order to keep students from participating in behaviors that place them at risk for AIDS. So that as many students as possible may take an active part, divide the class into groups and assign one of the skits to each of the groups.

In the first skit situation (My boy-/girlfriend wants me to sleep with him/her. I'm not sure this is what I want to do.) have the students assigned that skit write down all the issues they see in the skit situation. Do the same for the second skit situation. (My friends are using drugs, but I'm scared to do drugs.)

After groups have identified issues in their small groups, list the issues on the board and have each of the groups present its skit with the identified issues. Then have students identify possible statements they can use to communicate that they do not wish to engage in such behaviors. List such statements on the board and then have students select the statements they would like to use to finish their skits, and have them finish acting out the solution to their skit.

Some possible solutions might be:

- Honestly convey thoughts, feelings, and desired outcomes, such as: "I still want to go out with you and I really like you, but I feel uncomfortable with having sex." This opens the doors for further communication.
- Make an excuse, such as: "I can't go out tonight." Excuses may work in the short run, but relationships that are long-term and growing depend on honesty for their nurturance.
- Avoid situations in which the behavior can occur, such as "partying" with friends.

## **Syllabus Connection**

**II Emotional Health** – recognizing the relationships among emotional reactions, social relationships, and health for establishing patterns of behavior that promote emotional health and sound interpersonal relationships. (pp. 20-21)

**V Family Life Education** – appreciating the role of the family in society in preparing each member for the responsibilities of family membership and adulthood, including marriage and parenthood.

## **Values Integration**

**Respect for self/refusing** to compromise beliefs that one holds as important, and avoiding behaviors that put one at risk for infection

**Respect for others/acceptance** of the values and beliefs of others

**Self-discipline/making choices** that value one's personal beliefs and health despite the pressures of others

<b>Objective</b>	There are skills to practice that will lead to a healthful lifestyle.
<b>Learner Outcome</b>	Practice skills in saying no.
<b>Comprehensive Health Education Topic(s)</b>	II Emotional Health V Family Life Education
<b>Values Integration</b>	Respect for Self: Refusing to compromise beliefs that one holds as important; avoiding behaviors that put one at risk for infection. Respect for Others: Acceptance of the values and beliefs of others. Self-discipline: Making choices that value one's personal beliefs and health despite the pressures of others.

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<b>Motivating Activity</b>	The teacher will divide students into groups and provide students with the following skit situations to carry out: <ul style="list-style-type: none"> <li>• We've been going together for two years. My boy-/girlfriend wants me to sleep with him/her. I love him/her, and I don't want to lose him/her, but I'm not sure this is what I want to do.</li> <li>• A lot of my friends are using drugs. I don't want to lose my friends, but I'm scared to do drugs.</li> </ul>
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<b>Identification</b>	Students will identify the issues in each skit situation.
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<b>Effective Communication</b>	Student groups will present their skits to the class, without a solution to the situation.
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<b>Decision Making</b>	Student audience will list possible ways to say no in skit situations and will decide which actions and words work best to say no. Students will practice ways to say no.
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<b>Positive Health Behaviors</b>	Students will recognize and accept their own values. Students will be able to feel confident about their beliefs. Students will recognize situations when it is appropriate to say no and will practice how to say no.
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# TEACHER INFORMATION

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**Background** This lesson zeroes in on the gaps in interpersonal communication that often exist between an intended message and the actual message that is conveyed. Students must recognize the unclear or "mixed" messages that result when their words are not backed by appropriate actions or when they choose words which do not clearly delineate their thoughts, feelings, or intentions.

Sending a clear message involves four elements:

- self-awareness: recognition of one's own feelings, thoughts, and desired outcomes in a situation
- words: choosing words which accurately convey the intended message
- body language: use of appropriate posture, gestures, eye contact
- actions: follow-through behavior.

Being mindful of the gap that can emerge between what one wants to say and what one actually says, students may need coaching with specific words and body language. The students in the      s have a wealth of experiences and ideas they can bring to this activity.

Using this situation as a springboard, you may create your own situation based on your experiences with teenage students, or you may encourage students to pose their own situation for groups to work in. Role-playing is employed to reinforce the positive communication patterns for the rest of the class.

It may be helpful to define the following terms:

- desired outcome: what one wants to happen in a situation
- feeling: an emotional response usually expressed by one word, such as: happy, sad, angry, and scared
- clear message: a statement which clearly communicates a thought, feeling, or desired outcome. (Example: I feel hurt when I think you're ignoring me. I'd like you to understand that.)
- thought: ideas or beliefs that occur in our minds.

It is important for students to understand the meaning of these terms, as students at this age often confuse thoughts with feelings. Though feelings are usually an immediate response to a situation,

students need guidance in naming those feelings and in articulating their thoughts which may or may not be associated with those feelings.

***Syllabus Connection***

**II Emotional Health** – recognizing the relationships among emotional reactions, social relationships, and health for establishing patterns of behavior that promote emotional health and sound interpersonal relationships. (pp. 20-21)

**XI Healthful Lifestyles** – appreciating the need for responsibility and planning for developing and maintaining a healthful lifestyle. (pp. 38-39)

***Values Integration***

**Respect for self**/developing honest and clear communication patterns enhances one's self-confidence and reflects self-responsibility

**Respect for others**/recognizing the value of honesty in relationships

<b>Objective</b>	There are skills to practice that will lead to a healthful lifestyle.
<b>Learner Outcome</b>	Practice sending clear messages through effective verbal and non-verbal communication.
<b>Comprehensive Health Education Topic(s)</b>	II Emotional Health XI Healthful Lifestyles
<b>Values Integration</b>	Respect for Self: Developing honest and clear communication patterns enhances one's self-confidence and reflects self-responsibility.  Respect for Others: Recognizing the value of honesty in relationships.

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**Motivating Activity** The teacher will pose the following situation to the class:

Alex and Gloria have been seeing each other for a few months. Gloria does not want to become any more involved physically than they have been, and she senses Alex does. She continues to spend a lot of time with him alone and puts herself in uncomfortable close encounters with Alex.

**Identification** Students will identify the message Gloria may be giving Alex.  
Students will discuss the four elements of a clear message:

- self-awareness:
  - recognizing one's feeling in response to a situation
  - knowing one's thought about a situation
  - deciding what one wants in a situation
- words:
  - choosing words which accurately convey the intended message
- body language:
  - use of appropriate posture, gesture, eye contact
- actions:
  - follow-through behavior

**Effective Communication** Students will role-play Gloria's response to Alex by communicating her discomfort, her thoughts and concerns, and her preferences for the ways they spend time together.

Students will match the nonverbal elements of tone, posture, gestures, and eye contact with their verbal message.

**Decision Making**

Students will decide on situations in their lives in which they may be giving mixed messages and when they can send a clear message instead.

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**Positive Health Behaviors**

Students will take time to become aware of their feelings, thoughts, and desired outcomes in response to a situation.

Students will use "I" statements and appropriate nonverbal signals to communicate their feelings, thoughts, and desired outcomes to others.

# TEACHER INFORMATION

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<b>Objective</b>	There are skills to practice which lead to a healthful lifestyle.
<b>Learner Outcome</b>	Recognize and evaluate media messages regarding sexuality.
<b>Comprehensive Health Education Topic(s)</b>	V Family Life Education XI Healthful Lifestyles
<b>Values Integration</b>	Reasoning: Recognize explicit and implicit meanings of messages and images.  Respect for Self: Awareness and concern for one's sexuality as an ingredient of personal dignity.  Respect for Others: Awareness and concern for the sexuality of others as an ingredient of their personal dignity.

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<b>Motivating Activity</b>	Students will list two or three examples for each of these categories: <ul style="list-style-type: none"><li>• movies</li><li>• soap operas or TV serials</li><li>• commercials</li><li>• music videos</li><li>• magazine advertisements</li></ul>
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<b>Identification</b>	With teachers, students will identify messages about sex or sexuality conveyed in the examples cited.  These might include: <ul style="list-style-type: none"><li>• "Everybody does it" – Having sex is okay.</li><li>• "Sex is fun" – There are no painful consequences or risks associated with sexual behavior.</li><li>• "Sex sells" – It is what makes people and things attractive.</li></ul>
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<b>Effective Communication</b>	Students will discuss how these messages are communicated: <ul style="list-style-type: none"><li>• directly or explicitly – through the words or behavior of an attractive person or character</li><li>• subtly or implicitly – through images, words, or behaviors which suggest sexual meanings or attempt to arouse sexual interest</li></ul>
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**Decision Making**

Students will decide what effects such media messages have on the attitudes and behaviors of teenagers.

Students will decide which messages reflect attitudes and behaviors that can mislead teenagers.

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**Positive Health Behaviors**

Students will recognize explicit and implicit media messages regarding sexuality.

Students will effectively analyze and evaluate for themselves the validity of sexual messages conveyed through the media.



## ACTIVITIES.....

### 1. Review the previous lessons by asking the students to:

- A. Name the four ways AIDS is transmitted:
- Unprotected sexual intercourse
  - Needle sharing
  - Contaminated blood and blood products
  - Pregnant woman to her unborn child
- B. Review the ways AIDS is not transmitted.

There is no evidence to indicate that the Human Immunodeficiency Virus (HIV) is spread in any ways other than those listed above. Several long-term studies have been conducted with family members of people with AIDS. None of these family members have become infected through everyday contact. Therefore, people need not be concerned about casual transmission of the HIV through casual contact such as: sharing eating utensils, hair brushes or towels, or by being in public places such as: restaurants, schools, in elevators, or on public transportation.

### 2. Ask the students to explain what is meant by a "high risk behavior". What are some high risk behaviors that relate to AIDS?

- A. High risk behaviors: an action with great possibility of danger or harm.
- B. There are risk behaviors related to the transmission of AIDS that must be considered. It is important to point out that a person who is HIV infected may not have the disease AIDS. Yet, an infected person, having no signs and symptoms, may infect others by engaging in high risk behaviors. The following are considered to be high risk behaviors for contracting the HIV:

- |                                      |   |
|--------------------------------------|---|
| Unprotected<br>Sexual<br>Intercourse | <ul style="list-style-type: none"><li>- <u>Sexual intercourse with an infected partner.</u> During sexual intercourse the HIV can enter the bloodstream of the uninfected partner through tears in the linings in or near the vagina for a female and in the skin of the penis for a male.</li><li>- <u>Anal intercourse with an infected partner.</u> Anal intercourse is the placing of an erect penis into the anus of a partner. Rectal tissue can be easily torn during anal intercourse. This exposes tiny blood vessels that will allow HIV to enter the bloodstream from infected semen.</li><li>- <u>Sexual intercourse with multiple partners or with someone who has had multiple partners.</u> The greater number of sexual partners a person has or has had, the more likely that person is to eventually have sexual intercourse with someone who is HIV infected. A person also increases their risk of infection by having sexual intercourse with someone who has had multiple partners.</li></ul> |
|--------------------------------------|---|

- Sharing Needles - Sharing blood contaminated needles during intravenous drug use. When a person shares another person's needle and/or syringe to inject drugs, a small amount of a person's blood may remain on the needle or in the syringe and be injected directly into the other person's bloodstream. If that small amount of blood comes from a person who is HIV infected, it can be passed on to others sharing the needle. A person who becomes infected through intravenous drug use can also spread the virus through sexual contact.
  
- Contaminated Blood Products - Transfusion with infected blood or blood products. Before March 1985, it was possible that persons receiving blood transfusions could become infected with AIDS. Since that time all donated blood in the United States is tested for the presence of HIV antibodies. At this time there is little risk that AIDS will be spread from a blood transfusion in the United States. AIDS cannot be contracted from donating blood, since disposable needles are always used to collect the blood. People who know they are HIV infected should not donate blood, semen, or body organs.
  
- Pregnant Woman/Unborn Child - Pregnancy of an infected woman. A woman infected with HIV is more likely to develop AIDS if she becomes pregnant. She may also pass the HIV from her blood to her fetus through the placenta. Approximately one third of the babies born to HIV infected mothers, whether or not she actually has AIDS, will become HIV infected. Most of the mothers of these babies were intravenous drug users.

3. Use the transparency and teacher key "AIDS Risk Reduction and Prevention Behaviors" and discuss with the students preventive measures that can be used to eliminate and/or reduce the risk in each of the above behaviors. Note: The teacher may want to use the chalkboard or a flip chart instead of the transparency to record student responses. With each risk behavior encourage the students to name behaviors that will either eliminate the risk or for those who choose to continue in the risk behavior will modify the risk. Write their suggestions on the transparency. Use the teacher key to help facilitate this discussion.
  
4. Discuss with the students that AIDS prevention includes the use of condoms to modify risk behavior. Use the following questions as a guideline to discuss the use of condoms.

How effective are condoms?

If used properly, they are very effective. Condoms have to be used from the beginning of sexual contact until the end. They then should be removed carefully. When the condom is put on the penis a space should be left at the top.

Each package of condoms contains directions for proper use.

Condoms should not be used with petroleum jelly, stored in a very warm or very cold place or kept for more than a year. All of these conditions increase the possibility of breakage.

Why do some sexually active people not use condoms?  
They may be too embarrassed.

They may not know that condoms are an effective preventative for transmission of the HIV.

They may not think becoming infected with HIV could happen to them.

They may not be concerned about their partners.

They may think that there is something wrong with planning to have sexual intercourse.

Where do you buy condoms?

Drugstores, grocery stores, vending machines, or mail order.

Do you have to be 18 years old to buy condoms?

There is no age restraint for the purchase of condoms, nor is parent permission required.

5. Distribute copies of the student worksheet "Making Decisions About AIDS Prevention". Show the transparency from activity 3 "AIDS Risk Reduction and Prevention Behaviors" with the behaviors listed from that exercise. Have the students to use this as a resource for this activity.

Ask the students to write a response to the appropriate number of "Dear Abby" letters depending on the time available. After they have finished writing, ask them to form pairs and share their responses with one another.

If time permits, as a large group lead the students in a discussion of the following questions:

- a. What were some responses that you came up with in your pair? Which were most helpful? Least helpful?
- b. What did you learn from hearing other people's suggestions?
- c. How did you decide what to say in response to the letter?
- d. How would you want a friend to respond to you if you were asking for help about AIDS?
- e. Who would you turn to for advice in situations like these? Why would you choose this person?

#### SUMMARY:

The decisions to be sexually active or to use drugs have many implications including the risk of contracting AIDS. There are behaviors that we can choose to eliminate or modify risks. The choices we make should be made with a knowledge of facts about the risks and potential results.





# AIDS Risk Reduction and Prevention Behaviors

High Risk Behaviors	Eliminate Risk	Modify Risk
1. Unprotected Sexual Intercourse <ul style="list-style-type: none"> <li>a. Sexual intercourse with an infected partner</li> <li>b. Anal intercourse with an infected partner</li> <li>c. Sexual intercourse with               <ul style="list-style-type: none"> <li>- multiple partners</li> <li>- someone who has had multiple partners</li> </ul> </li> </ul>		
2. Sharing needles		
3. Contaminated blood and blood products		
4. Pregnant woman/unborn child		

Teacher Key

AIDS Risk Reduction and Prevention Behaviors

High Risk Behaviors	Eliminate Risk	Modify Risk
<b>1. Unprotected Sexual Intercourse</b> a. Sexual intercourse with an infected partner b. Anal intercourse with an infected partner c. Sexual intercourse with - multiple partners - someone who has had multiple partners	- Abstain from sexual intercourse (discuss the concept that we probably will not know if someone is infected) - Stop high risk behaviors	- Using condoms correctly - Using vaginal foam as a spermicide with a condom is more effective - Know the sexual history of your partner - Monogamous relationships (discuss the difficulty of knowing this at their age)
<b>2. Sharing needles</b>	- Abstain from using IV drugs - Abstain from using any illegal drugs	- Do not share needles or syringes - Do not use contaminated needles
<b>3. Contaminated blood and blood products</b>	- Same risk reduction and prevention behaviors as sharing needles - The risk of transmission of HIV via blood transfusion is very low, probably in the range of one per 60,000 units of blood or less with present antibody screening.	
<b>4. Pregnant woman/unborn child</b>	- If HIV infected do not become pregnant	



## Making Decisions About AIDS Prevention

## I. Dear Abby,

I have been hearing alot about AIDS and I am worried about getting it. I am not sure how to keep from getting a disease like this, aside from not having sex. I am embarrassed about asking anyone else because I don't know what they will think of me. Will you help?

Signed,

Embarrassed

## II. Dear Abby,

I am worried about getting AIDS. My boyfriend has an older brother who shoots drugs. His brother's friends hang out at their house on the weekends when no adults are around. I am not sure whether my boyfriend uses drugs or not. I like this guy alot, what should I do?

Signed,

Worried

## III. Dear Abby,

My friend has asked me to spend the night at her house. I just heard today that her brother is now living there and he has AIDS. I'm afraid of going to her house. Can I get AIDS?

Signed,

Afraid

## IV. Dear Abby,

I know you will tell me that I am too young to have sex, but it is to late now to hear that. I do not want to get AIDS and it is on my mind alot. What can I do to protect myself?

Signed,

Too Late

V. Dear Abby,

I have a friend who is sexually active. I am concerned about him because he hangs around with a crowd that is known to practice risky behaviors. I've heard about AIDS and my friend's behavior concerns me. What should I do?

Signed,

A Friend

VI. Dear Abby,

I have been seeing this person for a long time. I've gone out with other people all along, but this guy is special and I want to make a commitment to him. Do you think that I should tell him about the other guys?

Signed,

Special

VII. Dear Abby,

I have had sex with several partners. Now I realize that I could have AIDS and if I continue my behavior, I could give AIDS to my partner. What should I do?

Signed,

Reputation

VIII.

Dear Abby,

I went with a boy for 1½ years and we had a special relationship. Now I realize that our relationship will end soon. What can I do in the future to be sure that I will not get AIDS?

Signed,

Is It Too Late

## NINTH - TWELFTH GRADE

**COAL III:** Evaluate the effects of disease on individuals, families, communities, and societies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Distinguish facts, myths, opinions, and unknowns relating to AIDS.
2. Examine ethical issues related to AIDS.
  - a. right to know vs. confidentiality
  - b. testing
  - c. discrimination
  - d. banking blood
3. Examine the physical, emotional, and family needs of people with AIDS and the financial costs of caring for them.
4. Demonstrate ways in which they can show caring for a person with AIDS.

1. Students will complete a myth/fact worksheet. pp. 290-294 (Worksheet 9-12B)

2. Teacher Information pp. 295-297

3. Teacher will lead a discussion concerning the economics and ethics of AIDS. Students will complete the two worksheets to reinforce the discussion. pp. 298-309 (Worksheets 9-12C and 9-12D)

4. Teacher Information pp. 310-317

5. Teacher Information pp. 318-319



# TEACHER INFORMATION

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Distribute the student worksheet "AIDS Testing Statements - Fact, Myth, Opinion, Unknown?". Tell the students to read the statements to decide which category best reflects each statement. Students should indicate their decision by placing an "X" in the appropriate blank space next to each statement.

Discuss responses and add the statements to the Fact, Myth, Opinion, and Unknown category lists on the board from Lesson One.





Student Worksheet

Name \_\_\_\_\_

AIDS Testing Statements - Fact, Myth, Opinion, Unknown?

Directions: Read each statement and place an "X" in the blank space under the heading which you think best reflects the statement.

	FACT	MYTH	OPINION	UNKNOWN
1. A HIV positive test means the person is probably infected with the HIV.	_____	_____	_____	_____
2. A positive test means a person has AIDS.	_____	_____	_____	_____
3. A positive test means the person has developed antibodies to the HIV and will definitely develop ARC and/or AIDS in the future.	_____	_____	_____	_____
4. A negative test means the person is not infected and will never develop the disease even if the person has participated in risk behaviors.	_____	_____	_____	_____
5. A negative test means the person is not infected <u>or</u> is infected, but has not produced antibodies.	_____	_____	_____	_____
6. Being tested for AIDS gives those engaged in risk behaviors better knowledge of whether they have been exposed to the HIV.	_____	_____	_____	_____
7. Being tested will serve as a "red flag" to make a person change sexual practices and practice "safe sex".	_____	_____	_____	_____
8. Testing contributes to AIDS research and knowledge.	_____	_____	_____	_____

Student Worksheet (con't)

Name \_\_\_\_\_

AIDS Testing Statements - Fact, Myth, Opinion, Unknown?

	FACT	MYTH	OPINION	UNKNOWN
9. Before being tested a person needs to consider how they might react to a positive result; how will it affect them, physically, mentally, and emotionally.	_____	_____	_____	_____
10. People who are not ready to deal with the emotional impact of the test results should not be tested.	_____	_____	_____	_____
11. People who do not participate in risk behaviors should not be tested.	_____	_____	_____	_____
12. A person with positive test results can be dismissed from or denied employment.	_____	_____	_____	_____
13. There are no groups required to take the test.	_____	_____	_____	_____
14. All people engaging in risk behaviors should take the test to find out if thst results are positive or negative.	_____	_____	_____	_____
15. AIDS testing is actually a series of testing that can only confirm the presence of HIV antibodies if all tests are completed.	_____	_____	_____	_____

Teacher Key

AIDS Testing Statements - Fact, Myth, Opinion, Unknown?

Directions: Read each statement and place an "X" in the blank space under the heading which you think best reflects the statement.

	FACT	MYTH	OPINION	UNKNOWN
1. A HIV positive test means the person is probably infected with the HIV. (Since we are not sure what antibody status means, we have to assume that all positive HIV have the virus.)	X			
2. A positive HIV test means a person has AIDS. (this is not a test for AIDS)		X		
3. A positive test means the person has developed antibodies to the HIV and will definitely develop ARC and/or AIDS in the future. (A few researchers believe that everyone with positive HIV may get AIDS - this is not supported by current research.)		X	(X)	
4. A negative test means the person is not infected and will never develop the disease even if the person has participated in risk behaviors. (There are a small number of false results and there may be a delay in the test responding positive as long as 6 months after infection.)		X		
5. A negative test means the person is not infected or is infected, but has not produced antibodies.	X			
6. Being tested for AIDS gives those engaged in risk behaviors better knowledge of whether they have been exposed to the HIV.	X			
7. Being tested will serve as a "red flag" to make a person change sexual practices and practice "safe sex". (Some people may be motivated to change their behavior while others may not.)			X	
8. Testing contributes to AIDS research and knowledge. (Most research is done through blind (study participants unidentified) research rather than voluntary testing centers.	X		(X)	

Teacher Key (con't)

AIDS Testing Statements - Fact, Myth, Opinion, Unknown?

	FACT	MYTH	OPINION	UNKNOWN
9. Before being tested a person needs to consider how they might react to a positive result; how will it affect them, physically, mentally, and emotionally. (not everyone should be tested - they must be prepared to deal with the results.)	X			
10. People who are not ready to deal with the emotional impact of the test results should not be tested. (Some people should wait until they have more information, time and counseling.)	X			
11. People who do not participate in risk behaviors should not be tested. (Unless you have a specific reason to be tested it should not be done - false test results are more common in low risk groups.)	X			
12. A person with positive test results can be dismissed from or denied employment. (the Michigan Handicappers' Civil Right Act protects them.)		X		
13. There are no groups required to take the test. (Military, immigration and some insurance companies require tests.)		X		
14. All people engaging in risk behaviors should take the test to find out if thst results are positive or negative. (Taking the test is a personal choice, everyone should practice safer sex and avoid sharing needles.)			X	
15. AIDS testing is actually a series of testing that can only confirm the presence of HIV antibodies if all tests are completed. (A positive HIV means the ELISA test was positive then repeated to confirm the results and then reactive on the Western blot test.)	X			



# TEACHER INFORMATION

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## **Background**

The debate provides a vehicle for exploring social issues – in this case, the balance between the individual's rights and society's rights. It also provides an opportunity for students to recognize that there is a dual responsibility present: to protect oneself from becoming infected by the AIDS virus and to prevent communication of the AIDS virus to others.

Information for each debate team can be gained by research that will provide current, accurate facts from libraries, local health agencies, etc.

In the past, the individual's rights have predominated in such instances as:

- random drug testing
- nondiscrimination in housing, education, employment.

Society's rights have predominated in such instances as:

- inoculations against tetanus, diphtheria, rubella, etc. for school attendance
- child abuse reporting.

As a part of this lesson, the students will be debating and discussing the following items:

- The screening test reveals whether or not a person has developed antibodies to the AIDS virus. If positive, the test cannot predict whether an individual will remain asymptomatic, develop ARC, or develop AIDS; but, if the test is positive, the individual is capable of transmitting the AIDS virus. Often, a second test may be necessary to confirm results.
- Screening for the entire population would be costly and difficult to organize and accomplish in a short time. Screening would also have to be repeated periodically.
- Screening for selected population groups who may be at risk, (IV drug users, homosexuals, those planning to marry, pregnant women, health care workers, prisoners, prostitutes, immigrants etc.) might miss other individuals who could be spreading the disease.
- Screening and disclosure may result in damage to occupational, professional, or personal status.

*(continued on next page)*

- Screening cannot help the infected individual because there is no present cure for ARC or AIDS.
- Screening can prevent the spread of AIDS by permitting infected individuals to abstain from behaviors that put themselves and others at risk.
- Screening would allow for identification, notification, and counseling of others who may have been exposed to the person with AIDS, to prevent further spread of AIDS.
- Screening can alert women to whether or not they are carrying the AIDS infection and thus protect unborn babies from the risk of infection.
- Screening is presently required by the military and may be required for immigrants.
- Screening can disclose the numbers of people presently infected by the AIDS virus, allowing society to predict the services that will be necessary to meet the needs of infected people as they move through the continuum from asymptomatic to ARC to AIDS. Screening will also allow society to allocate adequate resources to meet those needs.

***Syllabus Connection***

**X Community Health** – understanding the importance of developing health services responsive to present and projected community needs and for becoming a contributor to the health of the community. (pp. 36-37)

***Values Integration***

**Majority rule with respect for minority rights/balancing the individual's right to privacy with society's right for public health**

**Reasoning skills/thinking for oneself**

**Respect for others/appreciating diverse views**



<b>Objective</b>	There are social and economic implications of AIDS.
<b>Learner Outcome</b>	Recognize a balance between rights of an individual and rights of society.
<b>Comprehensive Health Education Topic(s)</b>	X Community Health
<b>Values Integration</b>	<p>Majority Rule with Respect for Minority Rights: Balancing the individuals's right of privacy with society's right for public health.</p> <p>Reasoning: Thinking for oneself.</p> <p>Respect for Others: Appreciating diverse views.</p>

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<b>Motivating Activity</b>	<p>The class will hold a debate on the following topic:</p> <p>Resolved: that mandatory AIDS testing is necessary to protect our society.</p>
<b>Identification</b>	<p>Students will identify:</p> <ol style="list-style-type: none"> <li>1. How is the AIDS virus transmitted?</li> <li>2. What does AIDS testing confirm?</li> <li>3. What are the rights of individuals in our society?</li> <li>4. What rights does society have to protect itself from spread of disease?</li> </ol>
<b>Effective Communication</b>	<p>Students will debate and discuss the debate topic.</p> <p>After the debate, the students will complete the following:</p> <ul style="list-style-type: none"> <li>• I was surprised that _____.</li> <li>• I learned that _____.</li> <li>• I would like to know more about _____.</li> </ul> <p>Student will recognize that it is acceptable to hold either point of view.</p>
<b>Decision Making</b>	<p>The class will vote on whether or not mandatory AIDS testing is necessary to protect our society.</p>

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<b>Positive Health Behaviors</b>	Students will recognize the balance between the individual's rights and society's rights.
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# TEACHER INFORMATION

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Grade 11-12

AIDS: Economics and Ethics

## STUDENT LEARNING OBJECTIVES:

1. Students will examine the financial costs of caring for a person with AIDS.
2. Students will examine trends and ethical issues related to AIDS.

## LESSON AT A GLANCE:

This lesson will allow students to clarify any facts and myths from previous discussions. Financial costs, future trends and ethical issues relating to AIDS will be examined.

## VOCABULARY INTRODUCED IN THIS LESSON:

civil rights  
congenital condition  
confidentiality  
diagnosed  
discrimination  
ethical  
hemophiliac  
insurees  
intravenous  
medicaid  
subsidized

## MATERIALS/RESOURCES:

### STUDENT WORKSHEETS:

"Financial Costs of Caring for a Person with AIDS from Diagnosis to Death"  
"Mr. Daniel Has AIDS"  
"Post-test - AIDS-Fact or Myth?"

### TEACHER KEY:

"Financial Costs of Caring for a Person with AIDS from Diagnosis to Death"  
"Mr. Daniel Has AIDS"  
"Post-test - AIDS-Fact or Myth?"

### TRANSPARENCY:

"AIDS Care Cost Dilemma"

ACTIVITIES.....

1. Have the students review the Fact, Myth, Opinion and Unknown category lists on the board. Allow statements to be moved with class consensus.

Note: The opinion and unknowns that are left should be recognized as statements that may change to the fact or myth list in the future but are statements about which we do not have specific knowledge today.

2. Divide the class into small groups (2-3 students) and distribute the student worksheet "Financial Costs of Caring for a Person with AIDS". Assign each group a case study (A-D, repeat as necessary) to calculate the costs of AIDS.

Have each group report the costs for their case study. Allow the class to discuss and compare the costs of the different case studies.

3. Distribute and discuss the student handout "AIDS Care Cost Dilemma" on projected costs and show the "AIDS Care Cost Dilemma" transparency. Identify and discuss questions that will need to be addressed by policy makers and legislators very soon.

- a. Should health insurance be denied to people who are in high risk categories?
- b. Should health insurance companies require testing of prospective insurees for the Human Immunodeficiency Virus?
- c. Should the state or federal government pay for the care of anyone who develops AIDS? i.e. through Medicaid

Note: This discussion can be personalized (i.e. friend or family member who had a blood transfusion 7 year ago) if students feel that AIDS will never touch them.

4. Divide the class into four groups of students and give each group a copy of the student worksheet "Mr. Daniels Has AIDS". Have each group select a recorder, and develop answers to the three questions. Copies of the teacher resource "State Civil Rights Legislation - Michigan Handicappers' Civil Rights Act" may assist the students in developing their answer. A copy of the local school district's AIDS policy may also be of assistance for the groups.

Give the students approximately ten minutes to formulate answers to the three questions on the worksheet. Bring the class back together and have the groups compare answers based on their knowledge.

Grade 11-12

Note: Administer the post-test, if a pre-test was given in Lesson One.

**SUMMARY:**

Explain to the students that all of us will be affected by the AIDS epidemic. Sometimes when discussing statistics, medical costs and research we forget the people who are suffering from - dying from this epidemic. All of us must be prepared to help others, to protect ourselves and the ones we love.

You may use this information about AIDS now or in the future, for yourself or for a friend.

The greatest protection against AIDS is to make decisions based on knowledge, not fear.



Financial Costs of Caring for a Person with AIDS  
from Diagnosis to Death

The following are case studies which describe the lifestyles of people who have been diagnosed with AIDS. Calculate the direct costs (actual costs of medical bills, etc.) and the indirect costs (money lost in unearned wages, etc.) of caring for these people for 13 months (from diagnosis to death).

- A. John is 25 years old. He has been shooting up drugs for 5 years. He has just been diagnosed with AIDS. John does not work regularly. He lives in a rooming house for \$5 a day. He has no family to turn to for help nor health insurance. His hospital bills average \$508 per day. He will be hospitalized 4 times, a total of 48 days, until his death. Calculate the following costs:

Direct Costs

Indirect Costs

Salary  
Medical (hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

\_\_\_\_\_  
Total

- B. Tanya is 23 years old and has a six month old infant. Both Tanya and her baby have AIDS. Tanya is a single mother living on a \$476 per month welfare check. She gets government subsidized health insurance for herself and the baby. She will be hospitalized 3 times, 10 days each, until her death. The baby will be in the hospital for a total of 75 days. Their hospital costs total \$983 per day. Calculate the following:

Direct Costs

Indirect Costs

Salary  
Medical (Hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

\_\_\_\_\_  
Total



- C. Miguel is a 40 year old man with AIDS. He is single, is buying a home and makes \$50,000 a year. His monthly house payment is \$1,500 per month. He has private health insurance which covers 80% of his direct medical costs. He lives in a city that has many resources for people with AIDS, including food bank and shelters. He was hospitalized 5 times, for a total of 125 days at \$1,038 per day. Calculate the following:

Direct Costs

Indirect Costs

Salary  
Medical (Hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

\_\_\_\_\_  
Total

- D. Raymond is a 35 year old hemophiliac, married with two children, ages 3 and 5. He has AIDS, as does his wife and 3 year old child. The five year old is not sick. Raymond makes \$30,000 a year, rents his home for \$800 per month, and his family is covered by health insurance. The family has been hospitalized a total of 350 days at \$850 per day. Calculate the following:

Direct Costs

Indirect Costs

Salary  
Medical (Hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

\_\_\_\_\_  
Total

Financial Costs of Caring for a Person with AIDS  
from Diagnosis to Death

The following are case studies which describe the lifestyles of people who have been diagnosed with AIDS. Calculate the direct costs (actual costs of medical bills, etc.) and the indirect costs (money lost in unearned wages, etc.) of caring for these people for 13 months (from diagnosis to death).

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Clothes  
Travel/Transportation  
Funeral Costs

---

Total

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Direct Costs

Indirect Costs

Salary  
Medical (Hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

---

Total

Note: EACH GROUP'S ANSWERS WILL VARY DEPENDING ON HOW THE STUDENTS COMPUTE THE COSTS.

From: San Francisco Senior High AIDS Curriculum, 1987.

Grade 11-12  
Teacher Key

- C. Miguel is a 40 year old man with AIDS. He is single, is buying a home and makes \$50,000 a year. His monthly house payment is \$1,500 per month. He has private health insurance which covers 80% of his direct medical costs. He lives in a city that has many resources for people with AIDS, including food bank and shelters. He was hospitalized 5 times, for a total of 125 days at \$1,038 per day. Calculate the following:

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Salary  
Medical (Hospital stays, MD's,  
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Funeral Costs

---

Total

- D. Raymond is a 35 year old hemophiliac, married with two children, ages 3 and 5. He has AIDS, as does his wife and 3 year old child. The five year old is not sick. Raymond makes \$30,000 a year, rents his home for \$800 per month, and his family is covered by health insurance. The family has been hospitalized a total of 350 days at \$850 per day. Calculate the following:

Direct Costs

Indirect Costs

Salary  
Medical (Hospital stays, MD's,  
medicine)  
Food  
Rent  
Clothes  
Travel/Transportation  
Funeral Costs

---

Total

### AIDS Care Cost Dilemma

In 1986 the total medical costs for AIDS patients was \$1.1 billion. It is estimated that this figure may rise to \$8.5 billion or higher by 1991.

The costs today to provide care from time of diagnosis to death can easily reach \$75,000 per patient. Just to provide an AIDS patient with the drug AZT can cost up to \$10,000 a year. Private insurance companies claims for AIDS related care totaled an estimated \$745 million or 1% of the total in 1986.

Private insurance companies will pay a sizable portion of the medical bills for those AIDS patients lucky enough to have insurance coverage. An estimate puts the companies annual share of AIDS-related medical costs at \$10 billion in 1991 and at \$20,000 billion in the year 2,000. To meet those insurance claims, the companies will have to raise the price of medical insurance for everyone they cover.

Most AIDS patients become too sick to work and will lose their private health insurance. However, up to 80 million Americans have no health insurance or are insured by plans that won't cover AIDS-related care.

Medicaid, funded by the federal and state governments, already pays for the care of 2 out of 5 AIDS patients. To qualify for Medicaid a person must have used up all but \$1,000 of his/her savings. They can keep \$1,500 for a burial fund.



### AIDS Care Cost Dilemma

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### AIDS Care Cost Dilemma

- A. Should health insurance be denied to people who are in high risk categories?
- B. Should insurance companies requiring testing of prospective insurees for the Human Immunodeficiency Virus (HIV) ?
- C. Should the state or federal government pay for the care of anyone who develops AIDS?  
i.e. through Medicaid.



Mr. Daniel Has AIDS

Mr. Daniels is a popular teacher in your school. He became ill last May and was absent from school for a few weeks. When he returned to school he looked thin and tired, but was back to teaching his classes. Because he is well known at school, his absence was noticed by many of the students. You are now beginning to hear rumors that Mr. Daniels has AIDS.

1. You are a student in one of Mr. Daniel's classes. Will you ask to be transferred out of his class? Why or why not?
  
  
  
  
  
  
  
  
  
  
2. Some parents hear the rumor Mr. Daniels has AIDS. They call a special meeting with the principal and insist that they be told if Mr. Daniels has AIDS. They also demand that he be asked to resign if he does have AIDS. What do you think you would do if you were the principal?
  
  
  
  
  
  
  
  
  
  
3. Should any special provisions be made for Mr. Daniels if he has AIDS? Should he be allowed to eat in the cafeteria with the students, use the swimming pool, go on field trips, and so on?

Mr. Daniel Has AIDS

Mr. Daniels is a popular teacher in your school. He became ill last May and was absent from school for a few weeks. When he returned to school he looked thin and tired, but was back to teaching his classes. Because he is well known at school, his absence was noticed by many of the students. You are now beginning to hear rumors that Mr. Daniels has AIDS.

1. You are a student in one of Mr. Daniel's classes. Will you ask to be transferred out of his class? Why or why not?
  
  
  
  
  
  
  
  
  
  
2. Some parents hear the rumor Mr. Daniels has AIDS. They call a special meeting with the principal and insist that they be told if Mr. Daniels has AIDS. They also demand that he be asked to resign if he does have AIDS. What do you think you would do if you were the principal?
  
  
  
  
  
  
  
  
  
  
3. Should any special provisions be made for Mr. Daniels if he has AIDS? Should he be allowed to eat in the cafeteria with the students, use the swimming pool, go on field trips, and so on?

Note: ANSWERS MAY VARY.

Adapted from: San Francisco Senior High AIDS Curriculum, 1987.

# TEACHER INFORMATION

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## **Background**

By identifying with a fictional family that must confront the reality of dealing with AIDS, this lesson seeks to help students recognize the responsibilities of family in a variety of concerns.

You may want to work with a chart, such as the one in this lesson, on which students can fill in information as they obtain it. As gaps appear in the chart (usually in the Community column), students may want to consider actions they may take to help the community recognize and provide for needs. This lesson will combine well with Lesson #35 in providing a bridge to actual community resources.

Students will probably recognize that many of the concerns dealing with AIDS are similar to concerns that families confront with long-term illnesses or disabilities, and students who have been through this process may be able to provide special insights. When using students as resources, be careful to recognize that they may still be dealing with some concerns and may be very sensitive. This lesson also provides an opportunity to deal with the fact that, at present, there is no cure for AIDS and that families will need to cope with death and dying.

## **Syllabus Connection**

**II Emotional Health** – recognizing the relationships among emotional reactions, social relationships, and health for establishing patterns of behavior that promote emotional health and sound interpersonal relationships. (pp. 20-21)

**V Family Life Education** – appreciating the role of the family in society in preparing each member for the responsibilities of family membership and adulthood, including marriage and parenthood. (pp. 26-27)

**VI Diseases and Disorders** – understanding diseases and disorders and taking action to prevent or to limit their development. (pp. 28-29)

**X Community Health** – understanding the importance of developing health services responsive to present and projected community needs and for becoming a contributor to the health of the community. (pp. 36-37)

## **Values Integration**

**Respect for others/responsibilities to one's family**

**Respect for others/compassion, caring, and understanding**

**Respect for self/asking for help from individuals and groups that are able to provide assistance**



## **FAMILY RESPONSIBILITIES**

	<b>INDIVIDUAL</b>	<b>FAMILY</b>	<b>COMMUNITY RESOURCES:</b>
<b>PHYSICAL CONCERNS AND NEEDS</b>			
<b>EMOTIONAL CONCERNS AND NEEDS</b>			

## FAMILY RESPONSIBILITIES

	INDIVIDUAL	FAMILY	COMMUNITY RESOURCES:
<b>PHYSICAL CONCERNS AND NEEDS</b>	Weakness Pain Inability to eat/drink	<ul style="list-style-type: none"> <li>• Be familiar with how AIDS is communicated</li> <li>• Care for brother's needs</li> <li>• Respect his privacy</li> <li>• Spend time with him</li> </ul> Reading Watching TV Talking Playing games Listening to music	<ul style="list-style-type: none"> <li>• Participate in hospice and hospital support and treatment services</li> <li>• Participate in church and community organization outreach programs</li> </ul>
<b>EMOTIONAL CONCERNS AND NEEDS</b>	Fear of AIDS Fear of other people's reactions Fear of death and dying Need for companionship	<ul style="list-style-type: none"> <li>• Discuss AIDS with doctor, nurse, brother, family</li> <li>• Discuss AIDS with friends</li> <li>• Recognize and accept stages of dying</li> </ul> Denial Anger Grief Acceptance	<ul style="list-style-type: none"> <li>• Participate in AIDS support group</li> <li>• Use of social service programs</li> </ul> <ul style="list-style-type: none"> <li>• Support, as able</li> <li>• Financial Concerns</li> </ul>



<b>Objective</b>	There are skills to practice that will lead to positive health behaviors.
<b>Learner Outcome</b>	Recognize responsibilities of a family when a member has AIDS.
<b>Comprehensive Health Education Topic(s)</b>	II Emotional Health V Family Life Education VI Diseases and Disorders X Community Health
<b>Values Integration</b>	Respect for Others: Responsibilities to one's family; compassion, caring, and understanding.  Respect for Self: Asking for help from individuals and groups that are able to provide assistance.

**Motivating Activity** The teacher will distribute a "Dear Sam" letter:

Dear Sam:

My brother was just diagnosed as having AIDS. He will be home from the hospital next week. What needs to be done to help him?

UPSET

**Identification** Students will divide into groups to identify:

- physical concerns and needs
- emotional concerns and needs
- family concerns and needs
- community resources

**Effective Communication** Students will discuss roles and responsibilities of family for each identified concern.

Students will draft a response to UPSET that reflects each aspect identified.

**Decision Making** Students will decide how the family can meet the varying needs of the person with AIDS.

**Positive Health Behaviors** Students will practice behaviors that involve understanding the needs of others and the need for sharing responsibilities, such as:

- accepting responsibility within family
- spending time with family member
- involving person in family activities
- utilizing community services



# TEACHER INFORMATION

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## **Background**

In Lesson #34, students dealt with family responsibilities for persons with AIDS. This lesson confirms the present AIDS-related community resources and helps students to project what resources may be necessary in the coming years to meet the needs of increasing numbers of persons with AIDS. You'll find some of this data in the Appendix section on "Current Information on AIDS," but you will probably want to call the toll-free information number, 1-800-342-AIDS, or the New York State AIDS hotline number 1-800-541 AIDS, to get the latest figures. This information is also available through your local library or county health department.

This lesson provides a unique opportunity for students to watch a community respond to a crisis from the beginning, to identify community policymakers, to recognize the actions they are taking, and to participate in this process, as most communities are just beginning to recognize the size and implications of the AIDS epidemic.

You will want to remind your students that, at this time, once a person is infected with the AIDS virus, there are a variety of health and health-related services that may be needed.

The community has a responsibility to help the person with AIDS and his/her family to provide for their:

- physical needs and concerns
- emotional needs and concerns
- family needs and concerns.

The community has a responsibility to its members. It can provide this by having:

- accurate sources of information available in the community
- voluntary testing programs
- counseling services
- substance abuse treatment programs
- hospital/medical treatment services
- self-help groups
- social service supports
- mental health services.

Clearly there is no one "community" that can provide all of these services. Students will need to consider how each AIDS-related community resource fulfills a responsibility, where there are omissions, where there are overlaps, and what still remains to be done.

***Syllabus Connection***

**X Community Health** – understanding the importance of developing health services responsive to present and projected community needs and for becoming a contributor to the health of the community. (pp. 36-37)

***Values Integration***

**Respect for self/responsibility** to make oneself aware of threats to health, and community resources that can help

**Reasoning/identify** organizations which provide AIDS-related information for groups and individuals; resources directed to those who need; provide appropriate family and community support

# TEACHER INFORMATION

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<b>Objective</b>	There are community resources for information, help, and counseling.
<b>Learner Outcome</b>	Identify the community's present and projected responses to AIDS.
<b>Comprehensive Health Education Topic(s)</b>	X Community Health
<b>Values Integration</b>	<p>Reasoning: Identify organizations which provide information for groups and individuals related to AIDS; resources directed to those who have needs; provide appropriate family and community support.</p> <p>Respect for Self: Responsibility to make oneself aware of threats to health and community resources that can help.</p>
<b>Motivating Activity</b>	Students will research a list of AIDS-related community resources.
<b>Identification</b>	<p>Students will identify AIDS-related community resources currently in place:</p> <ul style="list-style-type: none"><li>• hospital</li><li>• county health agencies</li><li>• planned parenthood</li><li>• AIDS council</li><li>• religious organizations</li><li>• United Fund</li><li>• AIDS self-help support groups</li><li>• local chapter of American Red Cross</li><li>• local hemophilia chapter</li><li>• AIDS testing centers</li><li>• substance abuse treatment centers</li><li>• mental health centers</li><li>• hospices</li></ul>
<b>Effective Communication</b>	The teacher will invite an AIDS resource person to discuss current community AIDS needs and how they are being met and to project future community needs based on AIDS data.

*(continued on next page)*

**Decision Making**

Students will decide whether the resources the community is providing will be adequate for projected AIDS needs in the next five years.

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**Positive Health Behaviors**

Students will participate in community health practices by writing to appropriate agencies or volunteering their assistance to support AIDS-related community resources.



# TEACHER INFORMATION

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To set the stage with the students, explain that they should imagine that a friend of theirs has AIDS.

Ask the students to generate a list of ways they could show that they care about their friend. Write their ideas on the chalkboard. It may be helpful for students to begin with suggestions that are more distant from the person with AIDS (i.e. car washes, dances, bake sales) and move to more direct "caring" activities.

The list might include:

- Don't avoid your friend. Be there - it instills hope.
- Touch. A simple squeeze of the hand or hug can let your friend know that you still care.
- Laugh when your friend laughs. Weep when your friend weeps. Share these intimate experiences.
- Go for a walk together. Ask about and know your friend's limitations.
- Help celebrate holidays - and life - by decorating the home or hospital room.
- Help other people that know your friend. They may also be suffering. They may need someone to talk with as well.
- Don't be reluctant to ask about the illness. There may be a need to talk about your friend's condition. Find out if your friend would like to talk by asking: "Do you feel like talking about it?".
- Send a card that says "I Care!".
- Keep any promises you make.
- Be prepared for anger with you for "no obvious reason". Although you have been there and done everything you can. Permit this anger. Don't take it personally. Feel flattered that your friend is close enough to you to risk sharing anger or frustration.
- Talk about the future...tomorrow, next week, next year. Hope is important.
- Have a positive attitude. It is catching.
- Call and ask for a shopping list from your friend and make a "special delivery" to your friend's home.
- Be creative. Bring books, periodicals, taped music, a poster, home-baked cookies to share.
- Don't lecture or be angry if your friend seems to be handling the illness in a way that your think is inappropriate. Your friend may not be where you expect.

## NINTH - TWELFTH GRADE

**COAL IV:** Recognize the roles and responsibilities of local, state, and national health professionals, organizations, and agencies.

### TEACHER NOTES AND RESOURCES

#### STUDENT OUTCOMES

#### POSSIBLE ACTIVITIES

Students will:

1. Compare health and health-related organizations which provide AIDS information for individuals and groups:
  - a. Counseling services
  - b. Self-help groups
  - c. Social service support
  - d. Testing programs
  - e. Substance abuse treatment programs
  - f. Mental health services
  - g. Religious organizations
  - h. Hot lines
  - i. Hospital/medical treatment
2. Consider how each AIDS-related resource fulfills a responsibility, where there are omissions or overlaps, and what still remains to be done.
3. Discuss the issues related to the financial impact of AIDS on individuals, families, and societies.

1. Teacher Information p. 321
2. Teacher Information pp. 322-325
3. Invite resource people from local health-related organizations to speak to the class.
4. Students will design a poster that will inform various segments of the population (for example, elementary students, peers, the general public, or high-risk populations) about the nature of AIDS, the cost of the AIDS epidemic, high- and low-risk behaviors, the transmission of AIDS, etc.

**NOTE:** Information on the financial costs of AIDS (and predicted costs) are available from a number of sources; for example,

Harvey V. Fineberg, "The Social Dimensions of AIDS," Scientific American, October 1988, pp. 128-134.



# TEACHER INFORMATION

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Refer the students to the previous discussions and ask them to begin thinking about what resources a person with AIDS might need.

Draw a circle on the chalkboard or use the transparency "Resource Needs". Have students list the needs of a person with AIDS. List these needs as additional circles on the chalkboard or with the circles on the transparency. Needs that are most important should be placed closed to the center, less important needs further away (friends, medical, funds, counseling, church). Then ask the students what organizations are available to help with these needs.

## SUMMARY:

Whether or not you have the HIV will not change the fact that you will one day know someone who is effected by AIDS and who will need your help, support and caring. Be prepared to help that person.





NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Health Care Research Project

**DIRECTIONS:**

Contact an area health care facility that provides service to people with the AIDS virus. Report of the services available and care provided.

List Questions to Ask: Here are some examples:

Where can people with AIDS receive care?

How long is person normally hospitalized?

What is the course of treatment for AIDS?

Are there special precautions that health care providers take when caring for client with AIDS?

What is the cost per day?

What alternatives were there to a hospital stay?

List Agencies and People to Interview:

List Materials to Collect:

Evaluate the Availability of Effective Services: Here are some questions:

What level of treatment services and support are available?

What would it be like to be a person with AIDS in your community?

Where are there gaps in the services? Is there any duplication of services?

If you were a person with AIDS virus infection, what would it be like to live in your community?

**NOTE TO EDUCATOR:**

Purpose: Analyze economic factors and quality of health care related to AIDS.



NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Where Can Help Be Found?

**DIRECTIONS:**

Research an agency what provides information about AIDS or provides help and support for a person with AIDS and family members.

Agencies and organizations that can be researched:

- American Red Cross
- Hemophilia Foundation
- State Department of Health
- Community or County Public Health Agency
- Research programs at major universities
- Support services in gay and lesbian groups
- Community hospitals
- Family social services at the local, regional and state levels
- Religious groups

**NOTE TO EDUCATOR:**

Purpose: Access community resources.



NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Getting the Word Out

**DIRECTIONS:**

The local public health agency has asked you to help education the community about preventing and reducing the risk of AIDS. Please answer the following questions.

1. What messages about AIDS to you feel is the most important for people to receive?
  
  
  
  
  
  
  
  
  
  
2. What are your reasons for choosing this message?
  
  
  
  
  
  
  
  
  
  
3. How would you publicize this message to the community?

**NOTE TO EDUCATOR:**

Purpose: Apply concepts of prevention through development of a model program.

Directions: Create several teams in the classroom. Have each team develop a plan and present it to the rest of the class. Ask for critique of the plans, including aspects such as cost, timing, effectiveness of reaching the target groups, etc.





NAME \_\_\_\_\_ DATE \_\_\_\_\_ CLASS \_\_\_\_\_

ACTIVITY: AIDS - Make Your Message

**DIRECTIONS:**

You have been selected to design materials that will assist in preventing and reducing the risk of transmission of the AIDS virus and to prevent the negative impact of fear about AIDS.

1. Select an audience: young children, junior high students, college females, high school football players, your school's debate team, the youth group at your church or synagogue, the pep band, parents of students in your class, business men and women in the community, owners and workers of the fast-food restaurants in your area, students in alternative education programs in your area, or another group of your choosing.
2. Develop your message. In what high risk behaviors would people in the selected group participate? Include resources where people can seek services and/or more information.
3. Develop a dissemination plan. Consider the receptivity of the community, the cost and groups that could assist you.

**NOTE TO EDUCATOR:**

Purpose: Apply knowledge of prevention efforts; review ethical issues and community response.

Comment: Some examples are on the next pages: poster, pre-post test to peak interest of learners, business cards with hotline/helpline numbers.



# GLOSSARY



## HIV/AIDS Curriculum Glossary

**Abstinence:** Choosing not to have sexual intercourse.

**Acyclovir:** A drug used in the treatment of herpes infections; eases some of the symptoms of AIDS but has no effect on the virus that causes AIDS, HIV.

**Agency:** An establishment or government bureau that provides services to the public.

**AIDS:** Acquired Immune Deficiency Sndrome. The occurrence of certain infections or conditions that indicate a deficit in the body's defense mechanism, the cell-mediated immune system, occurring in a person with no known cause for diminished resistance to that infection or condition. This is a condition caused by an infection of a virus named HIV (Human Immunodeficiency Virus) which attacks and destroys certain cells in the body's immune system. The infections and conditions that would allow the diagnosis of AIDS include but are not limited to a rare pneumonia called PCP (Pneumocystis carinii pneumonia) and a rare cancer called Kaposi's sarcoma.

**AIDS Dementia Complex:** A complex progressive loss of intellectual function that is caused by HIV destroying brain tissue and other cells of the nervous system.

**Anal Intercourse:** Insertion of the penis into the rectum.

**Antibody:** A protein substance produced by B-cells in the immune system when T-helper cells identify the presence of foreign substances in the body, antigens. Their purpose is to neutralize the antigens and immunize the body against whatever infection the foreign substances may be trying to cause.

**Antigen:** Foreign substances which cause one's immune system to produce antibodies. Antigens can be bacteria, viruses, or other invading organisms or proteins not recognized by the body as part of itself.

**Anxiety:** Uneasiness caused by fear of danger or misfortune.

**ARC:** AIDS-Related Complex. A diagnosis given to people infected with HIV who have symptoms of the illness related to HIV infection (signs that the immune system is not working as well as it should be), but do not meet the diagnostic criteria necessary to be given the diagnosis of AIDS.

**Asymptomatic Infection:** Having an infection while exhibiting no noticeable signs or symptoms of the infection. While a person may be asymptotically infected with HIV, they remain capable of transmitting HIV infection to others who engage in risk-associated activities with these people.

**AZT:** Azidothymidine. Zidovudine, also called Retrovir, is a drug used to inhibit the replication of HIV within the T-helper cells that HIV uses to reproduce itself. This drug is not 100% effective, does not eliminate the HIV that is already in the body, and has some harsh side effects.

**Bacteria:** Single-celled living micro-organisms which reproduce by dividing themselves. One bacterium, if left to its own devices, could become 250,000 bacteria in six hours assuming that the colony did not run out of food. This is not a large quantity in the bacterial world when one considers that 10,000,000,000,000 bacteria could fit into one cubic inch.

**B-cells:** Cells in the body's immune system that function as the antibody producers. They are instructed to produce antibodies by the branch of the T-family cells known as T-helper cells.

**Behavior:** The manor of conducting oneself or the way a person acts.

**Bisexual:** A person who has a sexual preference for both males and females.

**Blood:** The fluid that is actually "living tissue" that circulates in the heart, arteries, capillaries, and veins of animals.

**Blood Donor:** A person who gives blood to be stored and used for a transfusion to another person.

**Blood Transfusion:** The injecting of blood, such as in an operation, into another person.

**Body Fluids:** Liquid substances found in or produced by the body. HIV has been found in many of the body fluids of HIV infected individuals, such as tears, saliva, urine, semen, and blood, but HIV can only be transmitted in semen and blood or visibly blood contaminated other body fluids. HIV found in those body fluids that could transmit HIV must enter the uninfected person through an opening or wound in the uninfected persons skin and get into his/her blood stream before HIV infection can occur.

**Bone Marrow:** Tissue in the center of long bones of the body which both white blood cells (cells of the body's immune system) and red blood cells are formed.

**Candidiasis:** Infection caused by a fungus that resembles yeast and is the causative agent of thrush.

**Carrier:** A bearer and transmitter of a causative agent of a disease to which he/she is immune or shows no symptoms of having.

**Casual Contact:** The usual daily interaction between people at work, in school, and in social situations.



**CDC:** Centers for Disease Control. An organization which keeps tabs on diseases of all sorts wherever they may occur. Whenever any unusually large incidence of a sickness is noted, they sound the alarm and recommend vaccines of courses of prevention to help ward off or control epidemics. CDC headquarters are located in Atlanta, Georgia; their information is gathered from all over the world.

**Cervix:** The neck of the uterus that extends into the vagina.

**Chlamydia:** A sexually transmitted disease (STD) caused by a bacteria. It is one of the most common STD's and produces symptoms similar to gonorrhea, infecting mucosal linings of the body. It is a common cause of eye infections and pneumonias in newborn babies.

**Cofactor:** One of the elements of an illness or disease which is caused or enhanced by the presence of the element, but by itself, would not cause the illness or disease.

**Communicable Disease:** A disease that can be transmitted directly or indirectly from one person to another.

**Condom:** A sheath used to cover the penis and prevent the sharing of body fluids during intercourse, thus theoretically preventing the sharing of infectious body fluids. Condoms are usually made of latex rubber but some are made of other material. Only latex condoms are recommended to prevent the contact of HIV infected body fluids during intercourse.

**Confidentiality:** Keeping sensitive and private information from being released or disclosed, information which could cause prejudice or discrimination.

**Contagious:** A disease that can be spread through the air as well as by touch from one person to another. HIV/AIDS is not contagious in that it requires an actual exchange of body fluids.

**Contaminated Needle:** A needle that has been previously used, with infected blood left in the needle which will be passed to the next user. IV drug users often share needle to inject their drugs.

**Cure:** Elimination of a disease and the return to good health.

**Cycle:** An event or happening that repeats itself over a period of time.

**Deterioration:** Falling from a higher level of health to a lower level of health.

**Disease:** A particular destructive process in an organ, such as the brain, or organism, such as man, with a specific cause and characteristic symptoms; an illness.

**Drug:** A substance used a medication to cure, treat or prevent disease.

**Drug Free:** Choosing not to use harmful, illegal drugs for any reason.

**Economics:** A social science concerned with the production, distribution, and consumption of goods and services. The study of costs and benefits

**ELISA:** Enzyme-Linked Immunosorbent Assay. A test used to detect specific antibodies that react to HIV. The most inexpensive and widely used test to date.

**Epidemic:** An outbreak or the sudden, rapid spread, growth, or development of a disease.

**Epidemiology:** The study of the distribution and causes of diseases.

**Ethics:** The moral principles of a person or a group of people.

**Exposed:** Contact to an infectious agent. Exposure to an infectious agent does not always lead to infection.

**False Negative:** In a laboratory test, a result that reads negative when it should be positive. A type of erroneous result.

**False Positive:** In a laboratory test, a result that reads positive when it should be negative. A type of erroneous result.

**Fetus:** Unborn baby developing in the uterus after the end of the second month of pregnancy. Before eight weeks, it is called an embryo.

**"Full-Blown" AIDS:** Having symptoms that allow the diagnosis of AIDS.

**Fungus:** A microorganism that lacks chlorophyll (the green pigment found in plants). Commonly known members are molds and yeasts.

**Genitals (Genitalia):** Reproductive organs.

**Germs:** A virus, bacteria or fungus which can cause disease.

**Gonorrhea:** A sexually transmitted communicable disease which presents as an inflammation of the linings of the genitals (urethra, cervix and rectum). It is caused by a bacterium named Neisseria gonorrhoeae. May also be called the "clap".

**Health:** A condition of being free from physical disease or pain.

**Helper-T Cells:** T-Helper Cells. Cells in the body's immune system that identify invading organisms and instruct B-cells to produce antibodies which are specific to the invading antigen.

**Hemophiliac:** Someone having a hereditary condition in which the blood fails to clot normally. This condition is normally expressed in males.

**Heterosexual:** a person who has a sexual preference for someone of the opposite sex.

**HIV:** Human Immunodeficiency Virus. The accepted name for the virus responsible for causing AIDS.

**Homophobia:** Unreasonable fear of homosexuals.

**Homosexual:** A person who has a sexual preference for someone of the same sex.

**Host:** Any person in whom an infectious agent can live and multiply.

**IFA:** Immunofluorescent Assay. Laboratory technique used to identify the presence of antigens or antibodies in tissue using fluorescent dyes to "tag" their locations. One application is to detect HIV antibodies in blood samples. More difficult to perform and more expensive than the ELISA. Also believed to be more specific (can accurately identify samples without antibody) than the ELISA, so sometimes used to verify ELISA results.

**Illegal Drugs:** Drugs that are not obtained through legal means or for legitimate medical purposes.

**Immunity:** The capacity the body has to resist infection by viruses and bacteria.

**Incubation:** In a medical context, the length of time between an individual first being infected with a disease-causing organism and the development of clinical symptoms or disease. The incubation period for AIDS averages over five years.

**Infected Partner:** An individual who is infected with a communicable disease who has sex with or shares a dirty needle with another individual and may pass the infection to that person.

**Infection:** The result of a disease-causing organism invading a host organism and being able to replicate in the host. Replication of the disease-causing organism may or may not result in clinical disease.

**Infectious Agent:** An organism capable of causing an infection in a susceptible host.

**Immune System:** The body's system of defense against disease, consisting of specialized cells and proteins in the blood and other body fluids.

**Immunity:** Your body's ability to resist disease.

**Immunization:** A method of producing resistance to a disease, usually by vaccination or inoculation.



**Intercourse:** A type of sexual contact involving one of the following: (1) insertion of a man's penis into a woman's vagina, called "vaginal intercourse"; (2) placement of the mouth on the genitals of another person, called "oral intercourse"; or (3) insertion of a man's penis into the anus of another person, called "anal intercourse".

**Intravenous Drugs:** IV drugs. Drugs which are injected into a vein.

**Intervention:** To interfere with or prevent something from happening.

**Kaposi's Sarcoma:** A rare type of cancer that occurs as spots on the surface of the skin or in the mouth. These spots are generally purplish in color and closely resemble a bruise. It is an opportunistic disease often suffered by AIDS patients.

**Latex:** Rubber. A material from which most condoms are now manufactured.

**Lubricant:** In this context, a substance applied to condoms or sexual organs which makes contact between condom and skin slippery. Lubricants can be purchased in most places where condoms are sold. Use only water-based lubricants with condoms, and read labels carefully, any fats or oils will break down the latex and may cause the condom to tear.

**Lymph Nodes:** Glands located throughout a person's body that help in protection against disease.

**Lymphocytes:** A kind of white blood cell produced in bone marrow that aids in fighting disease.

**Menstruation:** Normal cyclical uterine bleeding which recurs at approximately four week intervals in non-pregnant females.

**Method of Entry:** Manner in which organisms enter the host's body.

**Method of Exit:** Manner in which organisms leave the host's body.

**Misconceptions:** Incorrect beliefs or ideas:

**Mode of Transmission:** Manner in which an infectious agent is transmitted from one person to another.

**Monogamous Relationship:** A relationship in which two people are fully committed to each other; they are not sexually active with anyone outside of their relationship.

**Morals:** Of or relating to principles of right and wrong behavior. Conforming to the standard of right behavior.

**Myth:** An explanation not based on fact.

**Neurologic:** Pertaining to the nervous system or brain. Persons infected with the AIDS virus often develop neurologic infection with symptoms such as forgetfulness, confusion, perceptual problems, lack of coordination or loss of muscle control.

**Non-communicable Disease:** A disease that cannot be transmitted from person to person.

**Non-Oxynol 9:** A spermicide which has also been shown to kill the AIDS virus in laboratory studies. Available in some sexual lubricants which can be used with condoms, non-oxynol 9 is not an effective AIDS prevention method used on its own. Concentration of 5% or more are recommended.

**Opportunistic Infection:** An infection caused by a microorganism that rarely causes disease in persons with a normal immune system.

**Oral-Genital Intercourse:** Stimulation of the genitals by the partners mouth.

**Ostracize:** To prevent someone from being part of your group.

**Pandemic:** An epidemic covering an extremely large area, world-wide.

**Papilloma:** A sexually transmitted disease (STD) rapidly increasing in young persons. Papilloma refers to virus-caused tumors such as venereal warts. This virus is one of the cofactors for cancer of the uterine cervix.

**Pathogens:** Organisms that cause disease; i.e. viruses, bacteria, and fungi.

**Passive Immunity:** Resistance to an infection brought about by the introduction of antibodies furnished by someone else whose immune system has created them to defeat disease. This is not vaccination (the stimulating of one's own immune system to produce antibodies), and is only a temporary measure to control infection.

**Pathogenic:** Relating to micro-organisms which can cause disease.

**Peer Pressure:** The influence that persons of the same age try to make on another person's decisions; can be healthful or harmful.

**Penis:** The male reproductive organ.

**Perinatal Transmission:** Transmission of disease from mother to infant occurring before or at the time of birth.

**Physical:** Relating to the body. (physical contact)

**Placenta:** An organ that provides the unborn baby with oxygen and nutrients from the mother's blood.

Pneumocystis carinii Pneumonia (PCP): The most common life-threatening opportunistic illness diagnosed in AIDS. Caused by a protozoan parasite, it creates difficulty in breathing and is the most common cause of death for people with AIDS.

**Prevention:** Not allowing a disease or condition to happen.

**Prostitute:** Someone who performs sexual acts for payment.

**Pustules:** A small raised pimple-like area on the skin which contains pus.

**PWA: Person With AIDS.** Many people with AIDS prefer this term to others like "AIDS victim", or "AIDS patient". They would rather see themselves as active participants in their treatment, not helpless victims who passively wait to die. They are whole and complete persons, and the term "patient" reduces them to little more than a case of disease.

**Psychological:** Directed toward the will or toward the mind.

**Refusal Skills:** Ways to say no to risk behaviors.

**Reservoir:** An organism in which another disease producing organism or parasite lives and reproduces without damaging or causing disease in its host.

**Responsibility:** The quality or state of being responsible as in a moral, legal or mental accountability.

**Responsible Decisions:** Decisions that promote wellness for you and others.

**Retrovirus:** A special kind of virus which works in a backward fashion to attack and become part of the cell that it lives and reproduces in. HIV is a retrovirus.

**Risk Behavior:** A behavior that threatens your health and increases your chances of becoming ill. Risk behaviors for acquiring HIV infection include having sexual relations with persons who you do not know and may be infected with HIV, and sharing IV drug needles with people.

**Risk Situation:** A circumstance that threatens you and your health. You may not have a choice about a risk situation.

**Safer Sex:** Sexual activity which protects one from infection with the AIDS virus (or any other Sexually Transmitted Disease). In safer sex no body fluids are exchanged.

**Secretion:** A substance generated from blood or cells which may have cleansing, lubricating or other characteristics.

**Self Control:** A person's ability to make responsible decisions and choose responsible behaviors that will promote their health.



**Semen:** A fluid from the male which leaves the body from the end of the penis; contains the sperm and carries the AIDS virus if the male is infected

**Seroconversion:** The change blood undergoes when the body develops antibodies to HIV after being infected by HIV. The blood changes from seronegative to seropositive, a process that takes from six to eight weeks, and may be as long as six months.

**Sexual Intercourse:** Physical sexual contact between individuals that involves the genitals of at least one partner. Includes vaginal intercourse, oral intercourse and anal intercourse.

**Sexually Transmitted Disease (STD):** Diseases which may be transmitted through sexual intercourse from an infected individual to a non-infected partner.

**Sheepskin:** Another name for a condom. Condoms made from latex are the only ones that provide adequate protection from STD's.

**Societal:** Related to the interaction of human beings living together as a community.

**Spermicide:** Any substance used to help prevent pregnancy because of its ability to kill sperm. One spermicide, non-oxynol 9, has also been shown to kill the AIDS virus in laboratory studies.

**Spread:** The transmission of disease from one person to another.

**Statistics:** Numerical data from a population about such things as disease occurrence and transmission which help to predict future occurrence and plan intervention strategies.

**Support:** To assist, help or comfort someone in a time of need.

**Surveillance:** In public health terms, monitoring and collecting data in incidence of disease. Essentially, counting the number of cases.

**Susceptible Host:** A person who has no natural protection against a disease producing organism or parasite.

**Syndrome:** A group of related problems or symptoms.

**Syphilis:** An STD caused by a bacteria called a spirochete. Untreated syphilis can result in damage to many organ systems of the body such as the heart and brain and may even result in death.

**T-Helper Cells:** A type of lymphocyte (white blood cell) that helps fight infection by triggering the production of antibodies.

**Thrush:** A whitish lining found on the surface of the mucous membranes and caused by the yeast-like fungus monilia.

**Transfusion:** The transfer of blood from one person to another.

**Transmission:** The passing of an infectious agent from one person to another.

**Treatment:** The administration of a medication which will kill the disease producing organism.

**T-Suppressor Cell:** A type of T-lymphocyte that stops antibody production when the invading antigen has been inactivated.

**Uterus (womb):** A hollow, muscular, pear shaped organ in females in which the unborn baby develops.

**Vaccine:** A substance that contains dead or weakened pathogens that cause the immune system to produce antibodies. In the future we may have vaccines which are genetically-engineered non-lethal forms of such organisms.

**Vaginal Intercourse:** Insertion of the erect penis into the vagina during sexual contact.

**Vaginal Secretions:** Fluids produced by the female genitals that provide moistness and lubrication of the vagina. These secretions may contain blood, especially if the female is menstruating (having her period) or has a vaginal infection. Blood tainted vaginal secretions of an HIV infected female may carry enough HIV to be infectious.

**Viral Disease:** An illness caused by a virus. Unlike a bacterial disease, which can be cured with antibiotics, viral diseases can only be regulated by the body's immune response. Examples of viral diseases are smallpox, rabies, polio, yellow fever, AIDS and the common cold. Many sexually transmitted diseases (STD's) are caused by viruses.

**Virus:** The smallest of the micro-organisms causing infectious disease. Viruses can only reproduce while living in and utilizing the genetic make-up of other cells.

**Western blot Test:** A confirmatory test to verify the correctness of an HIV antibody ELISA test. This test is more difficult to perform, and more expensive than the ELISA test.

**White Blood Cells:** Cells found in the blood that are essential to our immune system and prime targets of HIV. There are five kinds of white blood cells found in the human body, and they have an average life expectancy of two to four days.









